FY00-FY01 Overview

Joint Service Chemical and Biological Defense Program

Preface

In an effort to provide a concise description of the Department of Defense's (DoD) Chemical and Biological Defense Program (CBDP), this pamphlet has been developed to highlight our major program efforts. Since the creation of the DoD and Joint level oversight offices, the individual Services (Army, Navy, Air Force, and Marines) have worked together to plan and support a robust, coordinated program in Chemical Biological Defense (CBD). This version of the document provides a summary of FY99 accomplishments and describes our goals for FY00 and beyond. The mission of the CBDP is to allow the military forces of the United States to survive and successfully complete their operational missions in battlespace environments contaminated with CB warfare agents.

In developing joint programs that respond to the needs of the warfighters and the CINCs, the CBDP evaluates input from Joint Vision 2010, from the Joint Future Operational Capabilities, the CINC's counterproliferation priorities, and the Joint Warfighting Science &Technology Plan. The CBDP supports research and development programs to leverage new technologies, pursues accelerated means of fielding new items for CB defense, and procures CBD materiel that meets Joint and Service-unique requirements.

The integrated CBDP includes programs that span the spectrum of total CB defense. Detection and identification of CB threats, individual and collective protection, decontamination, and medical countermeasures are each an important component of the overall effort. In addition to developing materiel solutions, the CBDP also addresses training and doctrine needs to improve readiness. The CBDP coordinates its programs with other DoD components (such as Defense Advanced Research Projects Agency), as well as other Federal agencies whose primary focus is on developing a defensive program to protect the civilian population of the United States from the threat of exposure to CB agents.

This document is intended to provide summary information. For more detail, please refer to the DoD Annual Report to Congress on the NBC Defense Program or visit the web sites listed in the pamphlet.

Anna Johnson-Winegar, Ph.D.
Deputy Assistant to the Secretary of Defense for
Chemical and Biological Defense Programs

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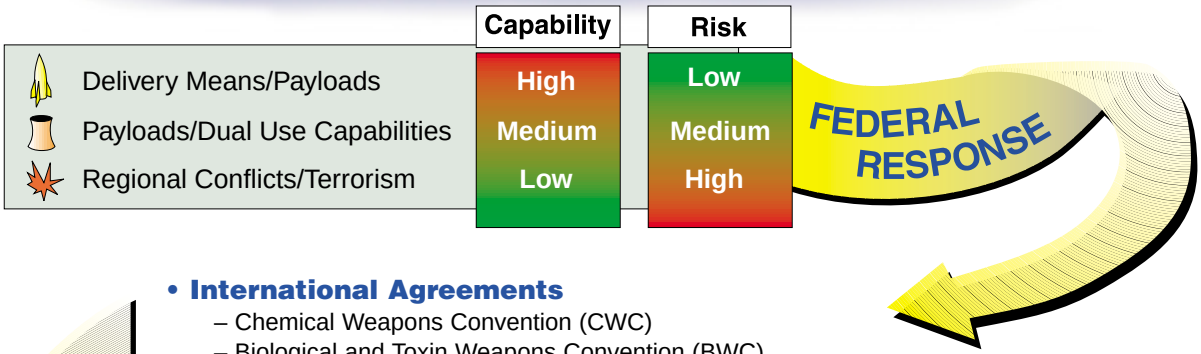
Global Threat

A Dangerous World…

- ***Regional Hotspots***
- ***Proliferation of WMD Technology***
- ***Rogue States/Terrorist Organizations***



- **International Agreements**
  - – Chemical Weapons Convention (CWC)
  - – Biological and Toxin Weapons Convention (BWC)
  - – Missile Technology Control Regime (MTCR)
- **National Security Strategy**
  - – **Chemical and Biological Defense Program**
  - – Counterproliferation Program
  - – Domestic Preparedness Program
    - • Crisis Management
    - • Consequence Management
      - - Federal (Integrated Task Forces, Focused Investment Strategies)
      - - State/Regional (Federal-State Coordination, State of Emergency Services)
      - - Local (First Responders, Incident Command System)

…A Fully Integrated Program

(Intelligence, Operating Structures, Tools)

Elements of National Response

Strategic and Tactical Intelligence
Battlefield Surveillance
Passive Defense
Proliferation Prevention
Active Defense
Counterforce
Countering Paramilitary/Terrorist Threat

Commodity Areas

- Contamination Avoidance
- Decontamination
- Protection (Individual/Collective)
- Medical Protection
- Modeling & Simulation

Focused Investments Directly Responsive to Operational Requirements

Potential Target Array

Civilian
Governmental Infrastructure

Military
National Military Command Structure

Shared Capabilities

Shared Capabilities

Critical Support Nodes:
- Utilities
- Transportation
- Food Supply Chain
- Medical Facilities

Shared Capabilities

Manufacturing and Agriculture

Population Centers

Theater Support Facilities
- Ports
- Airfields
- Depots and Staging Areas

Unengaged Assets

Committed Combat Elements

Consequence Management

A Full Partner in Preparedness

Force Protection

Threat to Military Missions

Chemical and Biological Weapons could adversely affect the application of future operational concepts identified in Joint Vision 2010 — the blueprint guiding US military capabilities development for the 21st Century.

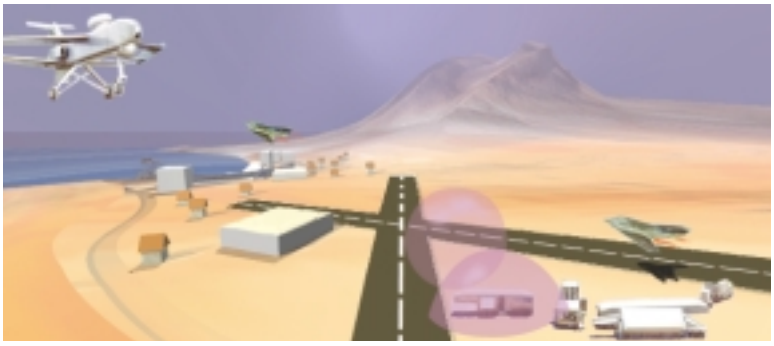
Dominant Maneuver

…multidimensional application of information, engagement, and mobility capabilities to position and employ widely dispersed joint air, land, sea, and space forces to accomplish the assigned operational tasks.

Challenge: Chemical and biological weapons can be used to disrupt the speed and tempo of deploying maneuver forces or to attack critical command and information nodes that are essential to the simultaneous dissemination of information.

Response: Effective protection of critical command nodes through the use of collective and individual protection measures could thwart the effectiveness of such attacks. Decontamination strategies could allow the restoration or sustainment of operations in a contaminated environment.

Precision Engagement



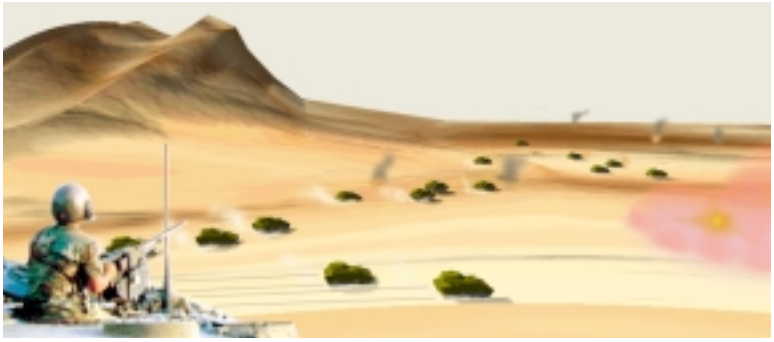
…allows US forces to shape the battlespace by providing the systems to locate the objective or target, provide responsive command and control, generate the desired effect, assess the level of success, and retain the flexibility to reengage with precision when required.

Challenge: Chemical and biological weapons can significantly erode availability of the full range of weapons to US commanders by denying access to weapons staging areas, blocking important entry points for munitions delivery, and targeting command and control nodes.

Response: Standoff and point detection means, combined with effective collective and individual protective systems, can mitigate, even preclude an effective CBW attack. Mobile labs for the identification of biological agents and mobile medical facilities with appropriate staff and equipment can mitigate any lasting effect on the port. Finally, decontamination measures are necessary to quickly restore operations on any affected portion of the airfield/port.

With timely fielding of appropriate chemical and biological defense systems, the overall objective of providing full spectrum dominance in future wars will be achieved.

Full Dimensional Protection

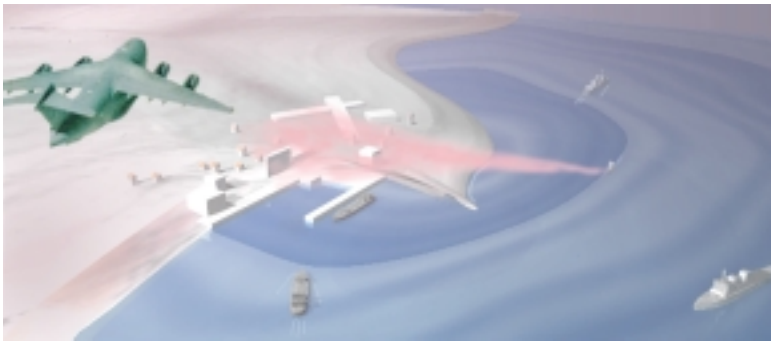


…envisions control of the battlespace to ensure our forces can maintain freedom of action during deployment, maneuver and engagement while providing multilayered defenses for our forces and facilities at all levels.

Challenge: The absence of long-range chemical and biological sensors and information dissemination systems degrade the effective application of current and future individual and collective protection systems.

Response: Development of long-range chemical and biological sensor systems effectively integrated into force-wide early warning nets coupled with a broad spectrum of medical prophylaxes will fulfill a critical aspect of the protective layering envisioned by this concept.

Focused Logistics



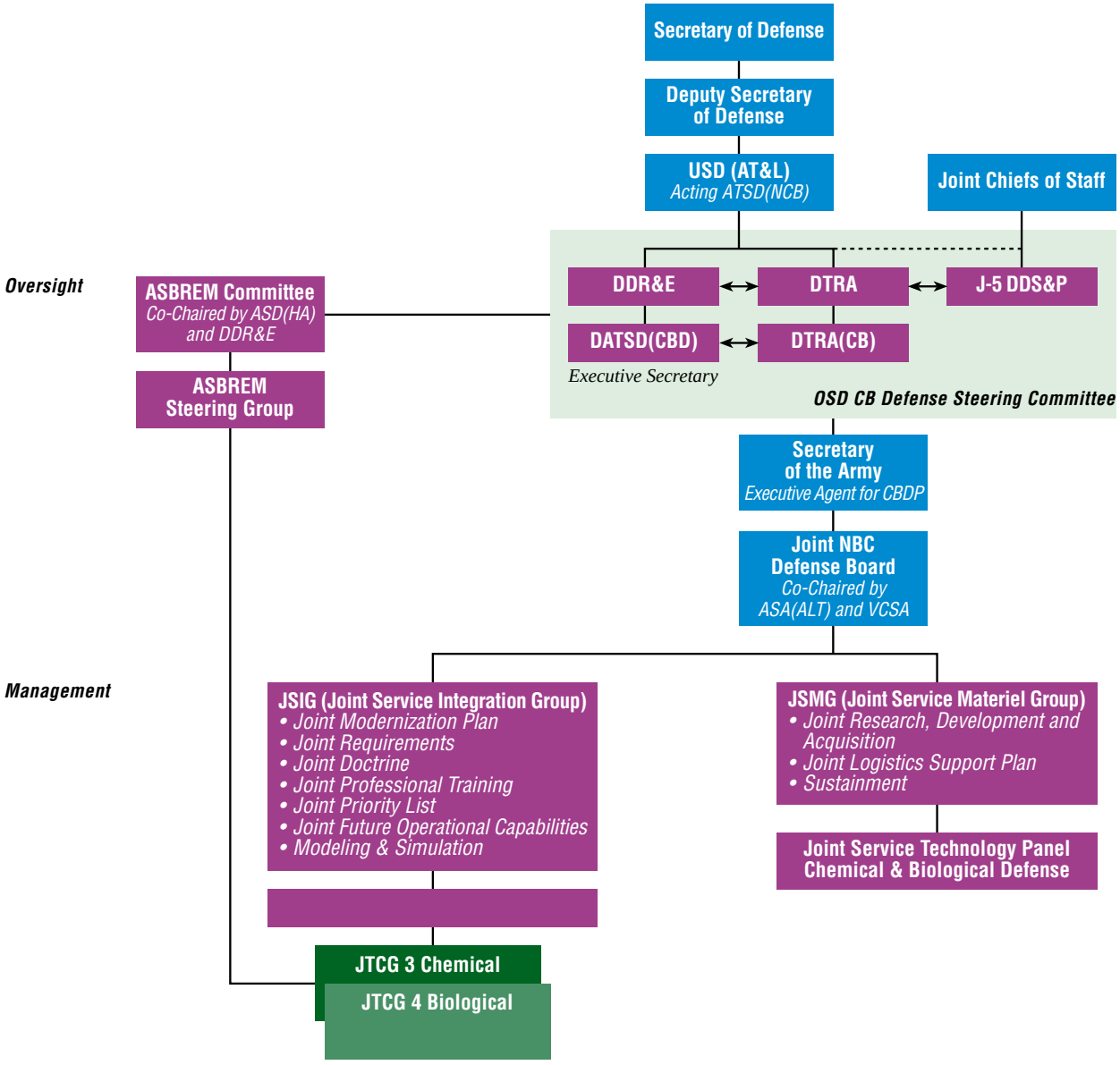
…fuses information, logistics, and transportation technologies to provide rapid crisis response, to track and shift assets enroute, and to deliver tailored logistics packages and sustainment directly to the appropriate theater of operations.

Challenge: Assuming success of the objective to reduce large, on-station stocks of materiel, the choke points of the materiel chain — ports, airfields, and command and control nodes — provide the logical targets for attack.

Response: Development of long-range chemical and biological sensor systems, effective individual and collective measures, sensor systems, and decontamination procedures will minimize the threat posed by chemical weapons to new sites and operations.

Joint Management Structure

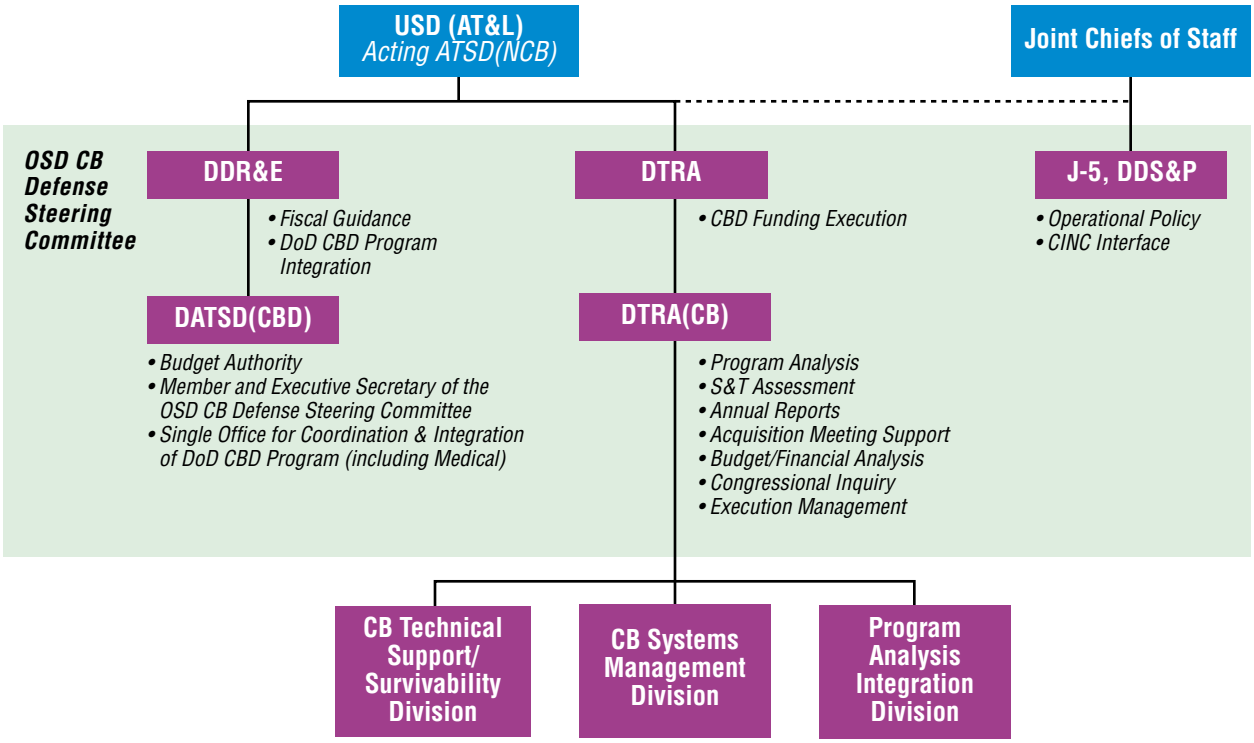
The National Defense Authorization Act of FY94, Public Law No. 103-160, Section 1703 (50 USC 1522), mandates the consolidation of all Department of Defense (DoD) Chemical and Biological (CB) Defense programs. Specific plans to coordinate and integrate the Services' NBC defense efforts are stated in the Joint Service Agreement (JSA), signed July 1994. Detailed procedures of coordination and integration of NBC defense efforts are contained in the DoD Chemical and Biological Defense Program Management Plan, signed September 16, 1996. The Joint NBC Defense Board, established by the JSA, is supported by the Joint Service Integration Group (JSIG) and the Joint Service Materiel Group (JSMG). The JSIG is responsible for Joint NBC Defense requirements, priorities, training, and doctrine; while the JSMG is responsible for coordinating and integrating all NBC Defense research, development, and acquisition efforts. These two groups perform the planning, programming, budgeting, and executing (PPBE) functions for Joint NBC Defense. The illustration below represents the current DoD CB defense management structure.



The Deputy Assistant to the Secretary of Defense for Chemical and Biological Defense Programs (DATSD(CBD)) remains the single office within OSD responsible for oversight of the DoD Chemical and Biological Defense Program (CBDP). DATSD(CBD) also retains approval authority for all planning, programming, and budgeting documents and is responsible for ensuring coordination between the medical programs and the non-medical CB defense efforts, and management oversight of the DoD CBDP in accordance with 50 USC 1522.

As a result of the Defense Reform Initiative, OSD oversight functions for the CBDP were transferred to the Director, Defense Research & Engineering (DDR&E), while DoD execution management of the program was transferred to the Defense Threat Reduction Agency (DTRA). In FY99, the financial management responsibilities for the CBDP were transferred from the Ballistic Missile Defense Organization to DTRA, with DATSD(CBD) retaining overall Budget Authority for the program. DATSD(CBD) relies extensively on the personnel resources of the Chemical Biological Defense Directorate, DTRA for day-to-day action officer support on CB defense issues.

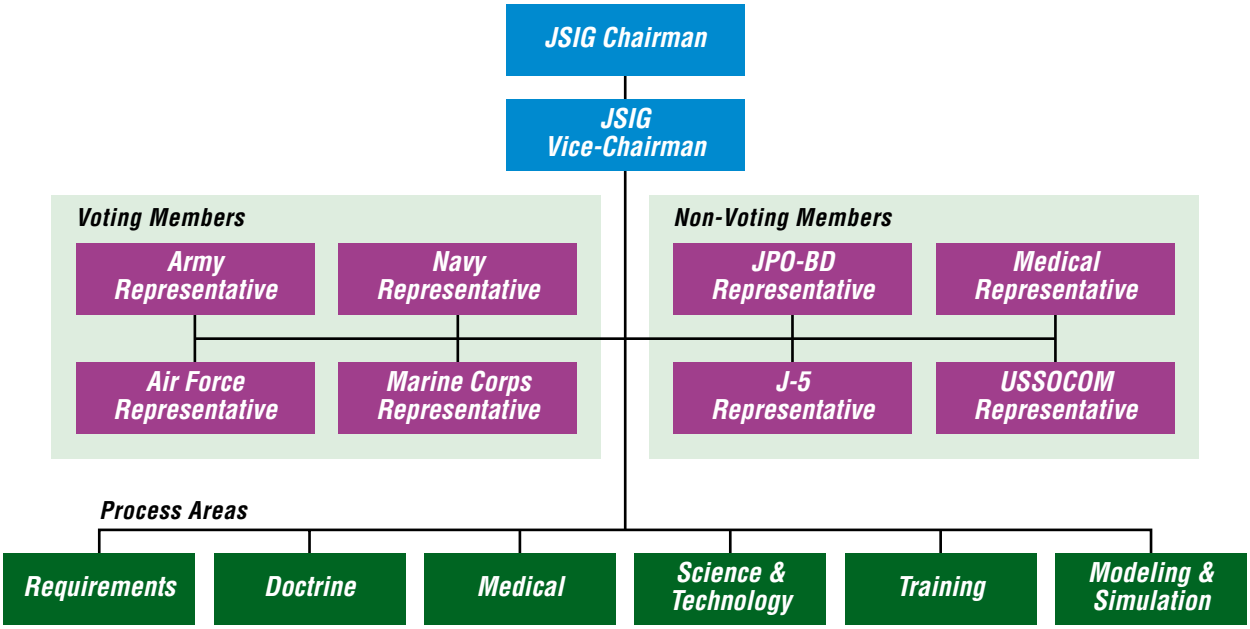
The linkage between DDR&E/DATSD(CBD) and DTRA was strengthened by establishing the OSD CB Defense Steering Committee, which is composed of the DDR&E; the Director, DTRA; the Director, Chemical Biological Defense Directorate, DTRA; from the Joint Staff J-5, Deputy Director, Strategy & Policy; and the DATSD(CBD) who serves as the executive secretary. The OSD CB Defense Steering Committee promulgates the DoD CBDP Management Plan, which specifies the relationships and responsibilities among the coordinating agencies and provides the fiscal and programming guidance to the Joint NBC Defense Board (JNBCDB) to develop the Program Objective Memorandum (POM).

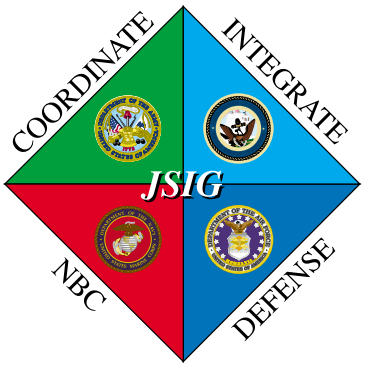


Joint Service Integration Group (JSIG)

The JSIG has the mission to coordinate and integrate the Services' NBC defense requirements and review NBC training and doctrine initiatives. The JSIG develops the Joint Service Modernization Plan, while concurrently developing the Joint requirements, priority list, programs list, and recommends Joint programs. The JSIG will coordinate and participate in the development of JSMG documents to include, but not limited to, the POM, the Joint Service NBC Defense Research, Development and Acquisition Plan, and the Joint Service NBC Defense Logistics Support Plan (LSP). The JSIG also has the responsibility for coordinating, integrating, and developing Joint NBC defense training and doctrine.

The JSIG is chaired by the Commanding General, US Army Maneuver Support Center on behalf of the Commanding General, US Army Training and Doctrine Command. Each Service is represented and has a single vote, with the chairman voting in case of a tie. Additionally, the Joint Staff, US Special Operations Command (USSOCOM), the Joint Program Office for Biological Defense (JPO-BD), and the Joint medical community have non-voting representatives.

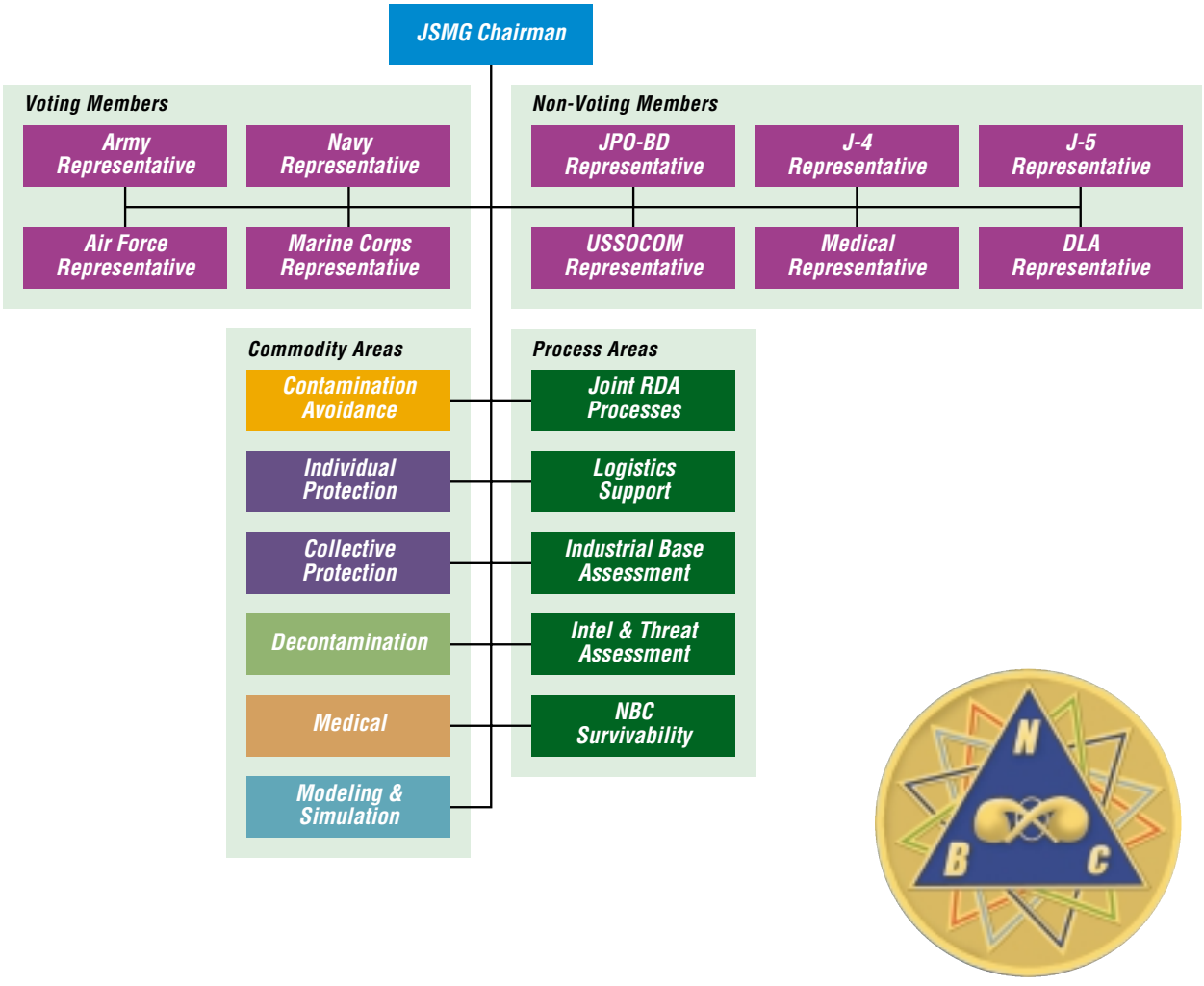




Joint Service Materiel Group (JSMG)

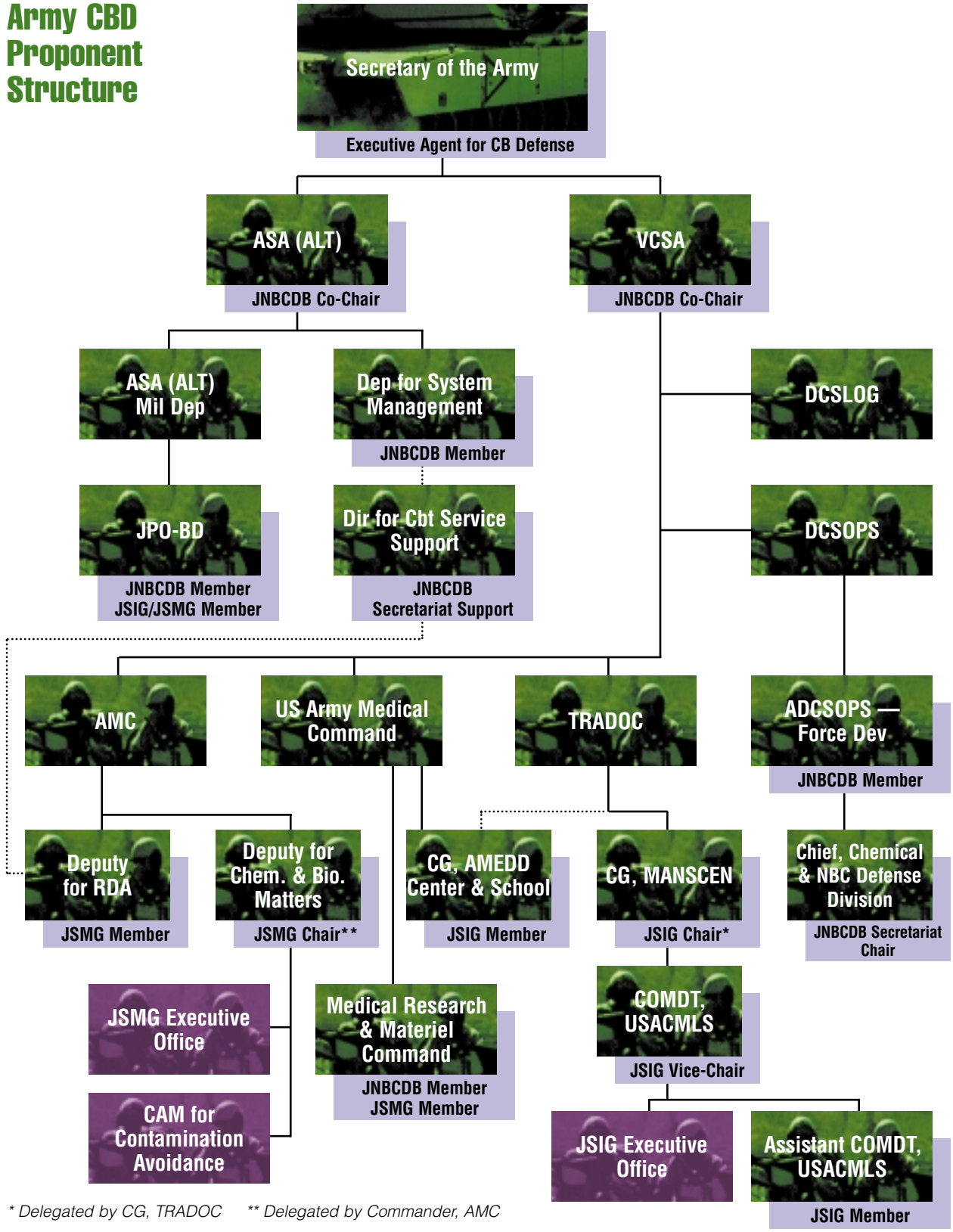
The JSMG coordinates and integrates planning and programming of the nation's NBC Defense Research, Development, and Acquisition, and logistics programs pursuant to Defense Planning Guidance and the intent of the US Congress.

The JSMG is chaired by the Deputy Chief of Staff for Chemical and Biological Matters, Army Materiel Command (AMC) on behalf of the Commander, AMC. Each service is represented on the JSMG and has a single vote, with the chairman casting the deciding vote in case of a tie. The JSMG coordinates and integrates the Services' NBC Defense science and technology, development and acquisition, logistics readiness and sustainment planning, programming, and execution. It prepares the Joint Service NBC Defense RDA Plan, the Joint Service NBC Defense LSP, and also reviews arms control, chemical demilitarization, non-stockpile, counter-terrorism (i.e., domestic preparedness), technology base, and developmental programs for possible NBC Defense applications and/or impacts. The JSMG and the JSIG jointly prepare the consolidated NBC Defense POM Strategy.



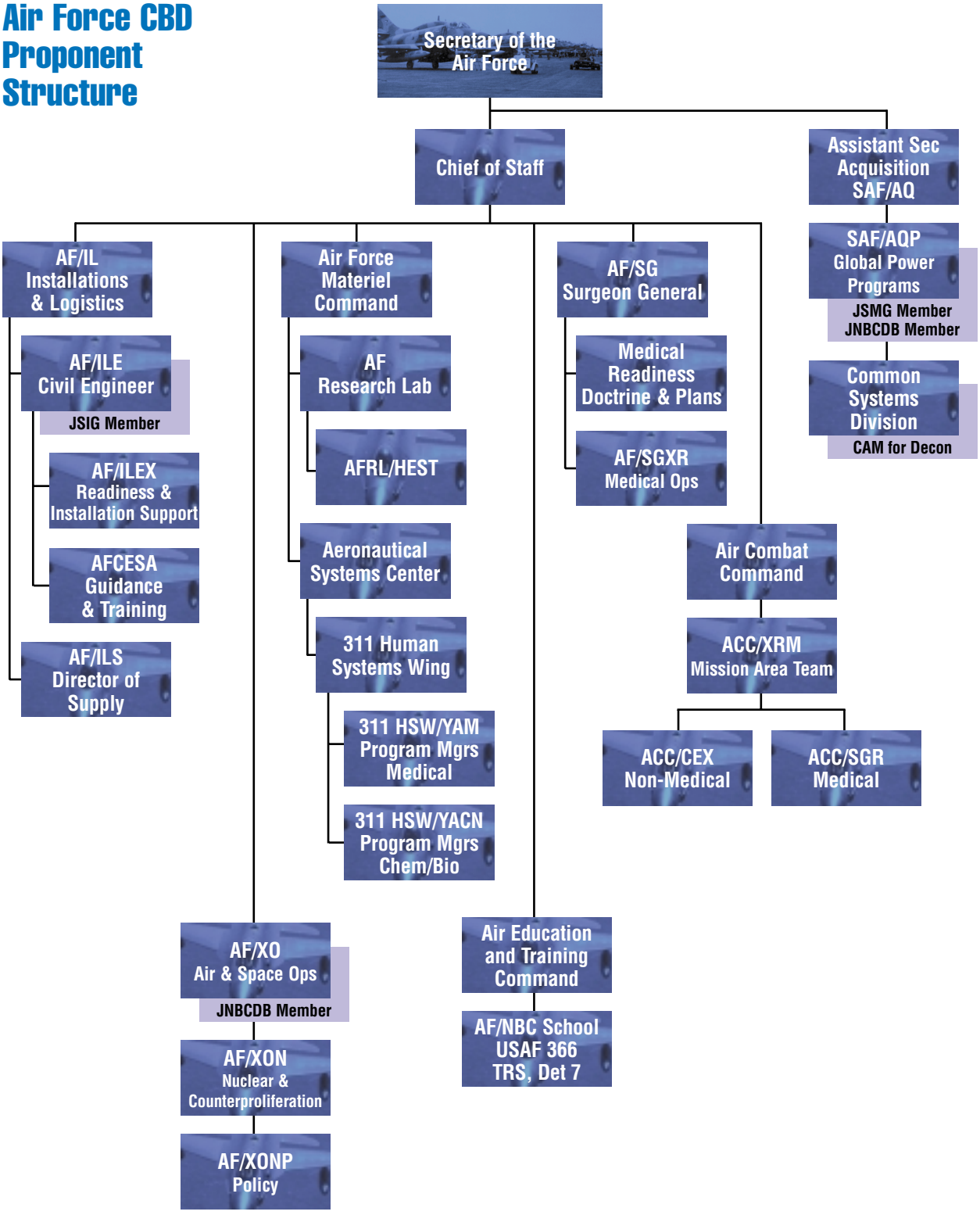
Service Proponent Structure

Army CBD Proponent Structure



** Delegated by CG, TRADOC ** Delegated by Commander, AMC*

Air Force CBD Proponent Structure



Service Proponent Structure

Navy CBD Proponent Structure

ASN (RDA)

Chief of Naval Operations

Commandant of Marine Corps

DASN Expeditionary Forces Programs

JNBCDB Member

Systems Commands

Naval Supply Systems Command

Naval Air Systems Command

Naval Sea Systems Command

DCNO Office of Naval Intelligence

Military Sealift Command

Commands & Activities

CNO Executive Agent for CB Defense

DCNO (Resources, Warfare Requirements and Assessments) (N8)

Surface Warfare (N86)

JNBCDB Member

Ship Safety and Survivability (N86DC)

JSIG Member

DCNO (Logistics) (N4)

Shore Installation Management (N46)

Director CNET (N7)

Director T&E and Tech Requirements (N091)

Naval Clothing and Textile Research Facility

Naval Air Warfare Center

Naval Facilities Engineering Command

FAC CPC

Integrated Warfare Systems Directorate SEA 05

JSMG Member

Surface Ship SEA 91

Logistics, Maint. & Industrial Operations SEA 04

Surface Ship Tech. & COMNSWC SEA 53

Dir. Ship Research & Dev. Group SEA 05R

Corporate CBR Program Manager SEA 05R1

CB Defense

Damage Control & Fire Protection SEA 05L4

Climate Control Systems Division SEA 05L2

Naval Surface Warfare Center Divisions

NSWC-DD (Dahlgren)

CB Analysis Branch B51

M&S CAM

CB Systems Technology Div. B50

CB Defense Systems Branch B53

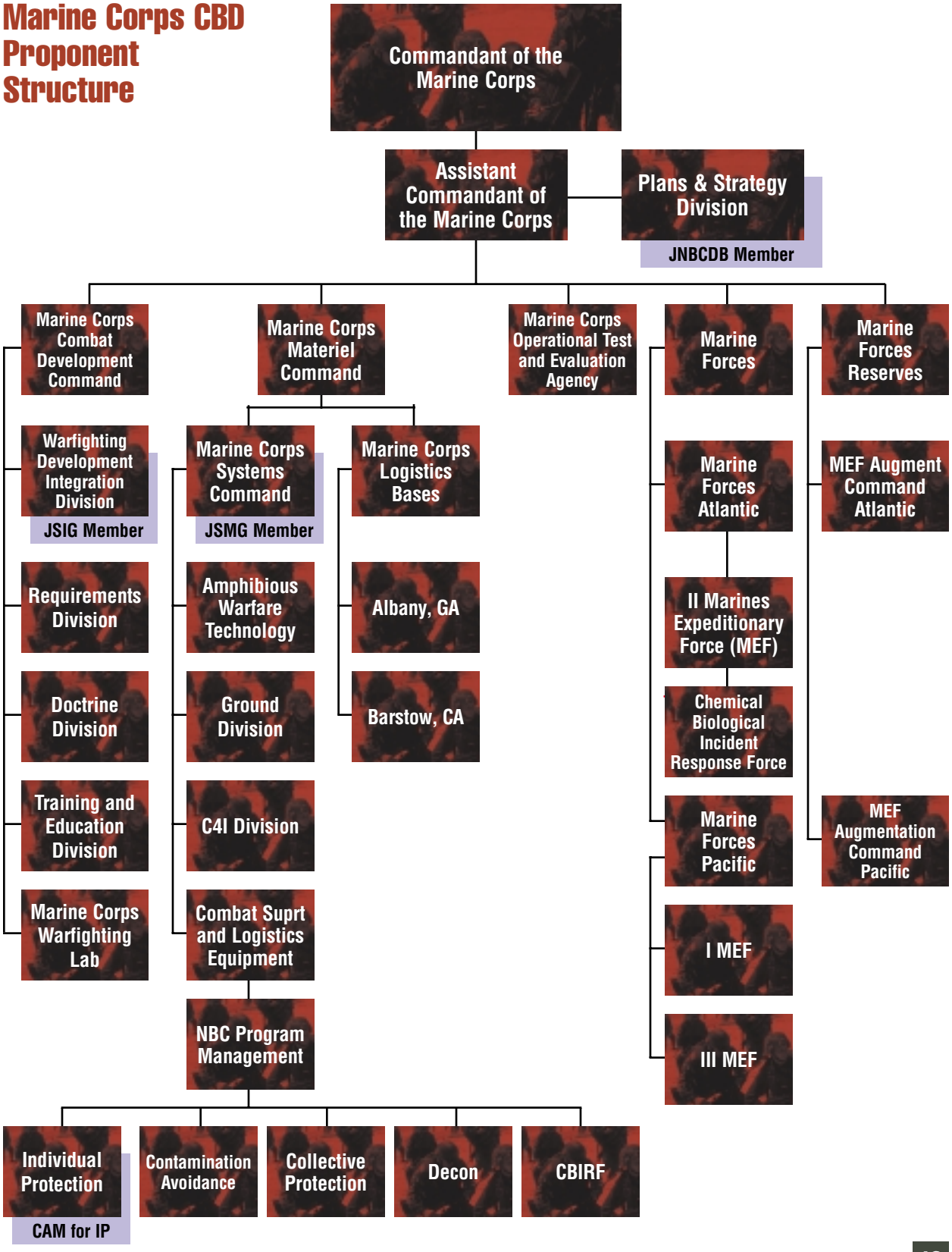
Coll. Prot. CAM

Chem Detection

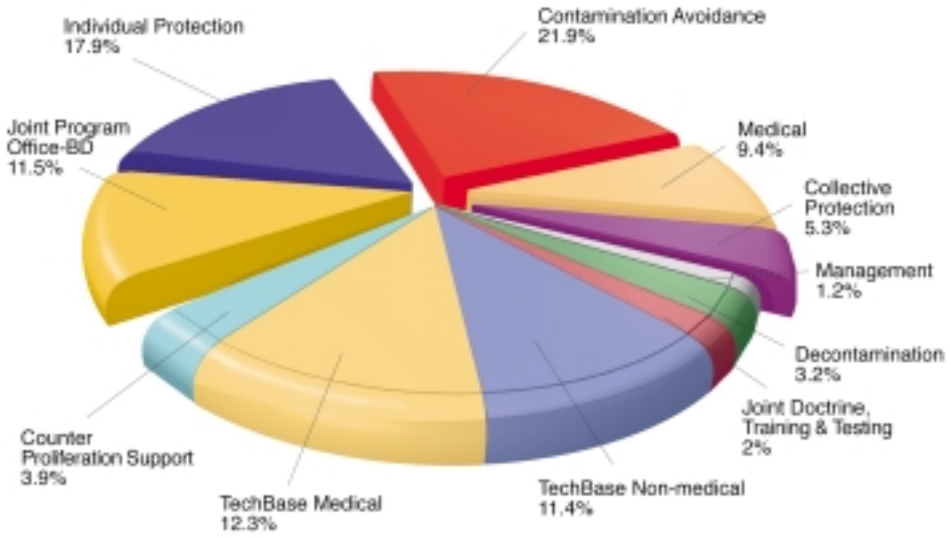
CB Protection

Bio Technology

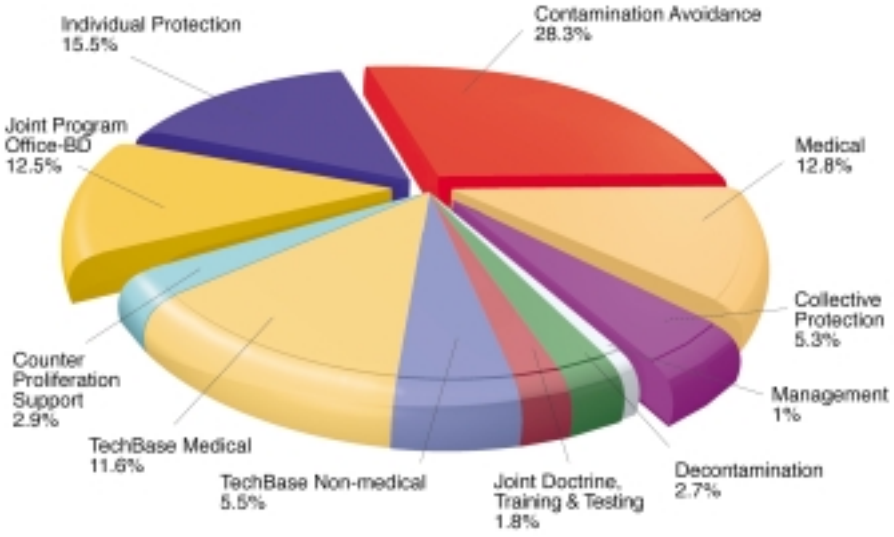
Marine Corps CBD Proponent Structure



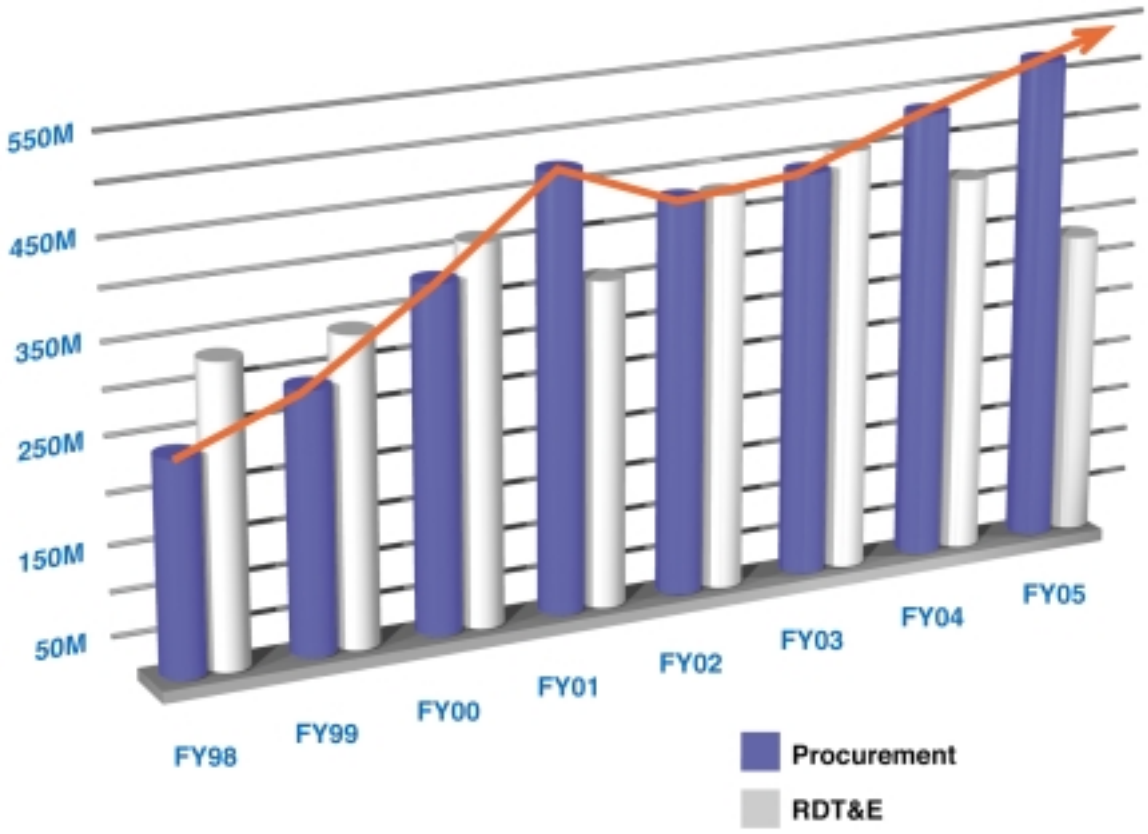
FY00 CBDP Funding Distribution (as a % of total funding)



FY01 CBDP Funding Distribution (as a % of total funding)



Total Funding for Joint Service Chemical and Biological Defense Program



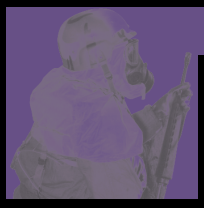
Integrated Approach to Counter the Threat

- **The Chemical and Biological Defense Program invests in technologies to provide improved capabilities to the Joint Force ensuring minimal adverse impact to operational tempo on the asymmetric battlefield. Sound Joint doctrine and realistic training remain fundamental to defending against weapons of mass destruction. CB defense programs are categorized broadly under five operationally oriented commodity areas:**

Contamination Avoidance

Concept: Contamination avoidance includes NBC reconnaissance, detection, identification, warning, and reporting. Earliest possible warning is fundamental in avoiding chemical and biological agent contamination.

Focus: The CBDP aggressively pursues technology advances in chemical and biological standoff detection, remote/early warning detection, sensor miniaturization, and improved detection sensitivity.



Protection (Individual and Collective)

Concept: In the event that early warning is not possible or units are forced to occupy or traverse CB contaminated environments, individual and collective protection systems provide the warfighter life sustaining and continued operational capabilities. Individual protection includes protective masks, protective suits, boots, and gloves. Collective protection equipment includes two general categories: stand alone shelters and integrated systems that provide a contamination free, environmentally controlled surroundings for soldiers to perform their missions. Collective protection, i.e., overpressure, can be applied to mobile and fixed command posts, medical facilities, rest and relief shelters, buildings/fixed sites, vehicles, aircraft, and ships.

Focus: The CBDP is pursuing technology advances that provide an individual with improved vision and voice capabilities, increased protection levels, and reduced heat stress over current individual protective equipment. Also, the CBDP pursues technology advances that improve generic CB protective filters and fans, and advances that reduce weight, volume, cost, logistics, and manpower requirements.

Medical Protection

Concept: Medical efforts include development of medical materiel and other medical equipment items necessary to provide an effective medical defense against chemical and biological agent threats facing US forces on the battlefield.

Focus: Chemical defense efforts include development of pretreatment therapeutic drugs, diagnostic equipment, and other life support equipment for protection against and management of chemical warfare agents. Biological defense efforts include development of vaccines, drugs, and diagnostic medical devices for protection against validated biological warfare agents to include bacteria, viruses, and toxins of biological origin.

Decontamination

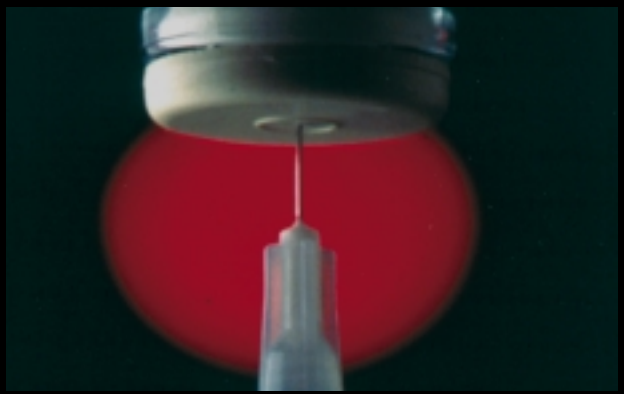
Concept: In the event that contamination cannot be avoided, personnel and equipment must be decontaminated in order to reduce and/or eliminate hazards after chemical and biological agent employment. Decontamination systems provide the force a regeneration capability for units that become contaminated. Modular decontamination systems have been developed to provide decontamination units with the capability to tailor their equipment to support specific missions.

Focus: The CBDP is pursuing technology advances in sorbents, coatings, and physical removal, which will reduce logistics burden, manpower requirements, and lost operational capability associated with decontamination operations.

Modeling and Simulation

Concept: The modeling and simulation commodity area was established in FY99 to standardize M&S CB analysis efforts across the Services, generate valid joint requirements, develop Verification, Validation, and Accreditation (VV&A) standards, develop polices and procedures for M&S standardization, and create a virtual proving ground for CB testing.

Focus: Current Service M&S efforts include meteorological models, transport and dispersion models, hazard and casualty assessment, computational fluid dynamics, hydrocodes, and constructive, live and virtual simulation.



Automatic Chemical Agent Detector Alarm (M22)

Lead Service

- **Automatic point detection and identification of nerve and blister agents**
- **Man-portable vapor alarm**
- **Provides enhanced capability over currently fielded M8A1 detector**

Basis of Issue Highlights:

Army
- 1 per platoon
- 1 per company headquarters
- 1 per monitoring/reconnaissance application

Navy
- Systems prioritized for shipboard operations (Ship ACADA)
- Systems prioritized for high threat Naval facilities

Air Force
- 35 per base

Marine Corps
- 5 per battalion

FY99 Accomplishments:

- Conducted developmental and operational testing (DT/OT) for Surface Sampler P3I
- Acquisition Strategy approved for Ship ACADA
- Procured 4,013 ACADA systems as follows:
  Army.....2,665
  Navy.....166
  Air Force 49
  Marine Corps 695
  National Guard.....438

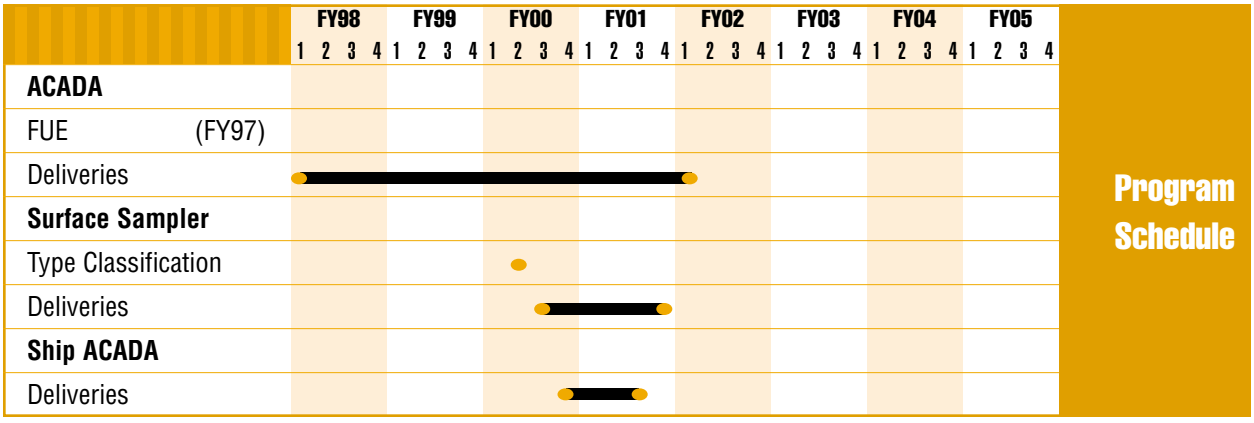
FY00 Objectives:

- Award Ship ACADA and Surface Sampler production contracts
- Procure 4,233 ACADA for Army and 298 for National Guard
- Procure 30 Surface Samplers for Army and 230 Ship ACADA for Navy

FY01 Objective:

- Procure 6,721 ACADA and 270 Surface Samplers for Army

Acquisition Phase: Production, Fielding/Deployment, and Operational Support



Program Transition Strategy:

ACADA replaces the M8A1 Alarm as an automatic point detector and augments the CAM/ICAM as a survey instrument. Ship ACADA is an abbreviated acquisition program to procure a shipboard detector variant of the ACADA.

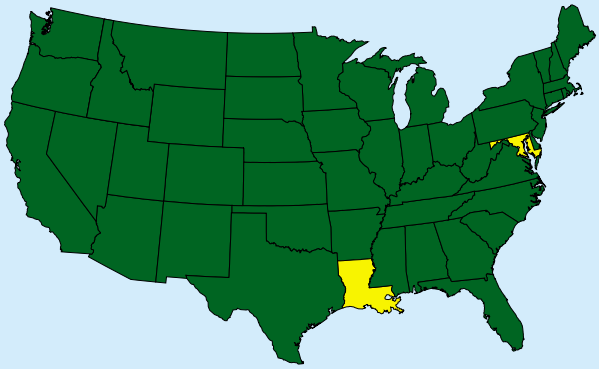
Contractors:

ACADA-M22
Graseby Dynamics, Ltd.
United Kingdom

Surface Sampler
SBCCOM
Edgewood, MD

Ship ACADA
STR, Inc.
Fulton, MD

PSI
New Orleans, LA



Biological Integrated Detection System

Lead Service

- **Semi-automated biological agent detection/identification suite mounted on a dedicated heavy High Mobility Multipurpose Wheeled Vehicle (HMMWV)**
- **Utilizes multicomplimentary bio-detection technologies**

Basis of Issue Highlights:

- 38 BIDS NDI systems 310th Chemical Co. (USAR)
- 3 BIDS NDI systems 100th Training Co. (USAR)
- 38 BIDS P3I systems 7th Chemical Co. (USA)
- 4 BIDS P3I systems U.S. Army Chemical School

FY99 Accomplishments:

- 35 BIDS P3I systems fielded to 7th Chemical Co., Ft. Polk, LA
- Procured 21 platforms for the 3rd Bio Detection Co.

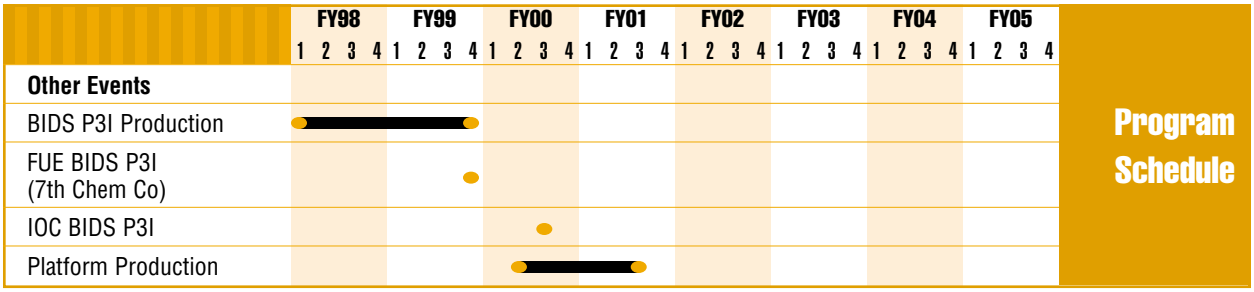
FY00 Objective:

- 4 P3I systems to be fielded to U.S. Army Chemical School, Ft. Leonard Wood, MO
- Procure 20 additional platforms for the 3rd Bio Detection Co.

FY01 Objective:

- 3 P3I systems to be fielded to 546th Maintenance Co., Ft. Polk, LA

Acquisition Phase: Production, Fielding/Deployment, and Operational Support



Program Transition Strategy:

To fill the urgent need for a biological detection system, yet field mature technologies, the BIDS has an evolutionary acquisition strategy. Initially an NDI (Interim) BIDS, consisting of primarily off-the-shelf instrumentation, will provide a limited manual detection/identification capability. This will be followed by a Pre-Planned Product Improvement (P3I) BIDS with an expanded and semi-automated detection/identification capability. Subsequent integration of the Joint Biological Point Detection System (JBPDS) will provide a fully automated, broad-spectrum biological detection/identification capability.

Contractors:

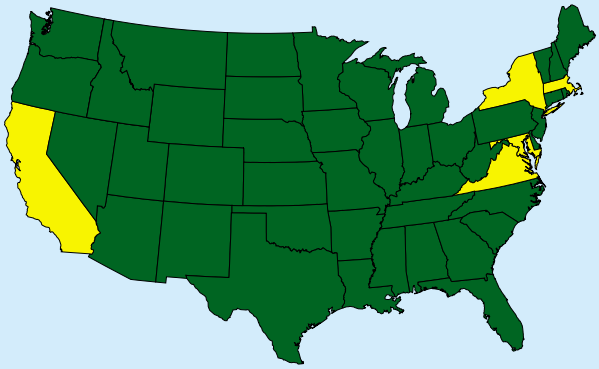
Bio Road
Hercules, CA

Bruker Analytical Systems
Billerica, MA

Environmental Technologies Group
Baltimore, MD

Harris, Corp.
Rochester, NY

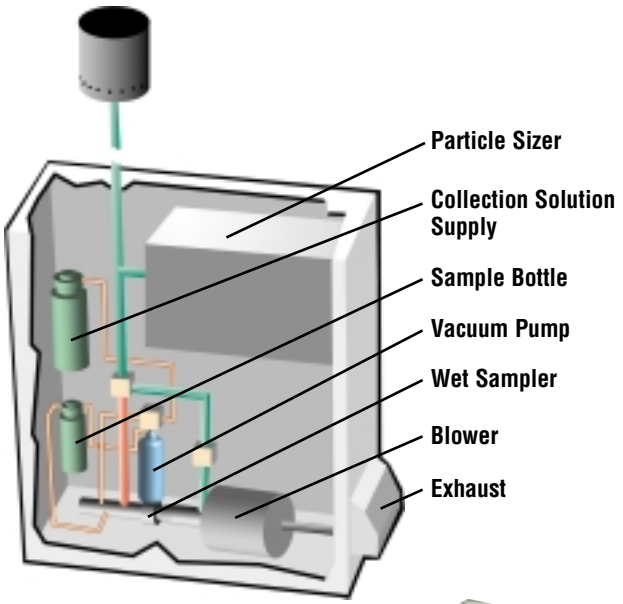
Marion Composites
Marion, VA



Interim Biological Agent Detector

Lead Service

- **Detects, identifies, and warns of biological agent presence**
- **Provides Navy interim biological agent point detection capability**
- **Links to visual and audible alarms located locally and in command spaces**

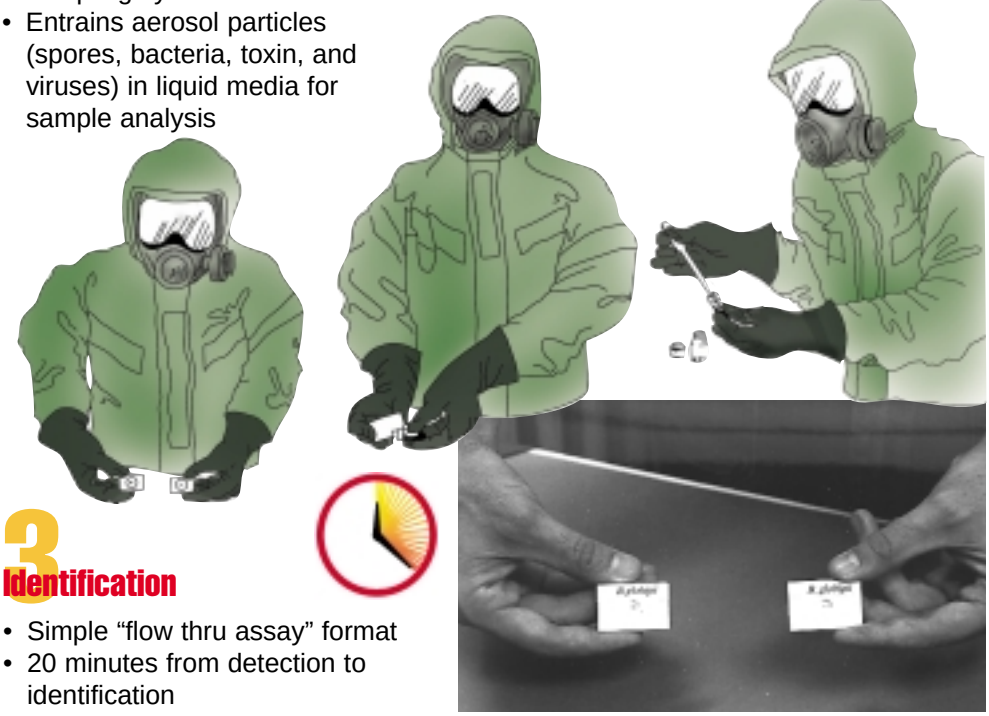


1 Detection & Warning

- Aerodynamic particle sizer
- Provides preliminary non-specific sensing
- Provides leading indicator
- Initiates collection mechanisms

2 Collection

- High-velocity wet cyclone sampling system
- Entrains aerosol particles (spores, bacteria, toxin, and viruses) in liquid media for sample analysis



3 Identification

- Simple “flow thru assay” format
- 20 minutes from detection to identification

FY99 Accomplishment:

- Continued support of rapid prototype systems and investigated aerosol background of Naval areas of operation

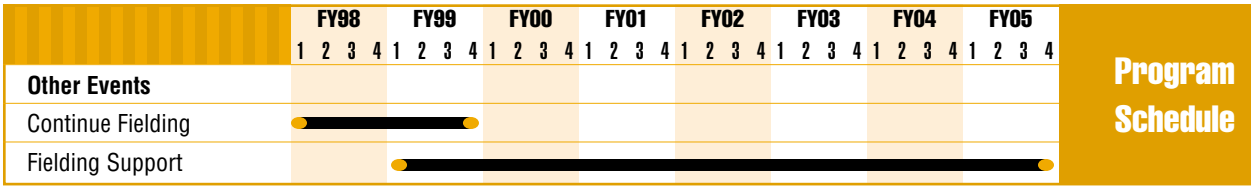
FY00 Objective:

- Continue fielding support of rapid prototype systems

FY01 Objective:

- Continue fielding support of rapid prototype systems

Acquisition Phase: Engineering and Manufacturing Development (Rapid Prototype)



Program Transition Strategy:

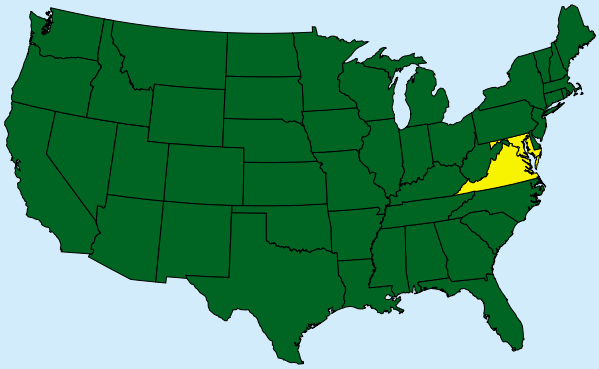
Fourteen interim systems fielded; five additional systems available for fielding based on CINC prioritization; one system at NCTCD, Ft. Leonard Wood for training. IBAD will be rotated from returning and installed on deploying Navy vessels. The Joint Biological Point Detection System (JBPDS) will replace the IBAD.

Contractors:

ATR
Baltimore, MD

STC
Hampton, VA

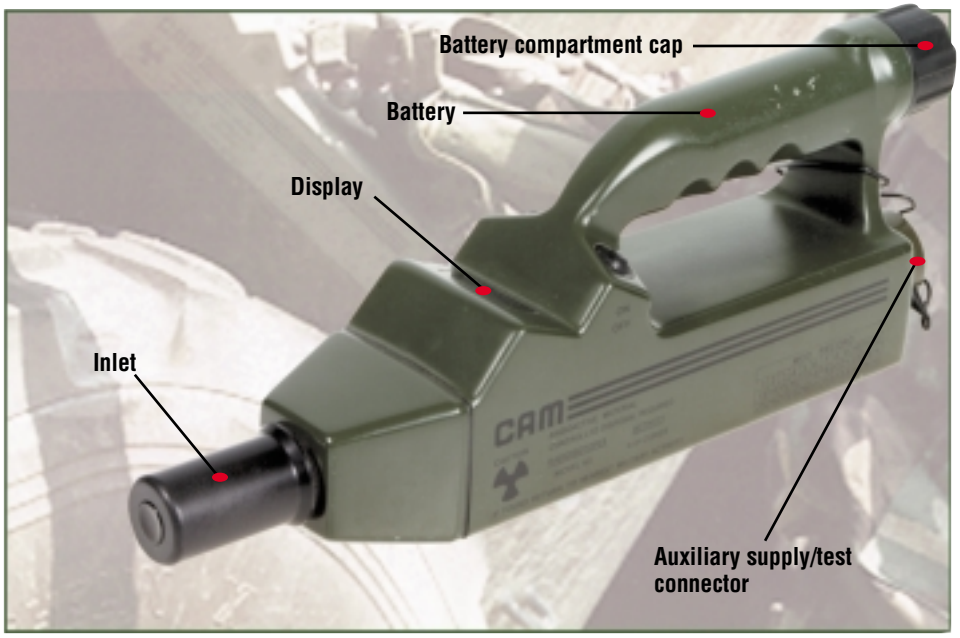
Sentel
Dahlgren, VA



Improved Chemical Agent Monitor

Lead Service

- Hand-held, realtime, low-level detector of nerve and mustard vapors
- Capable of day and night operation
- System is NBC contamination survivable



Basis of Issue Highlights:

Army

Chemical Units
- 2 per Reconnaissance Team
- 3 per Decontamination Squad

Medical Units
- 2 per Battalion Aid Station
- 3 per Medical Company
- 4 per Medical Company Corps
- 1 per Preventive Medicine Unit

Other Units
- 2 per company or equivalent size unit
- 2 per platoon size detached element
- 5 per area NBC School
- 10 per Army Service School
- 4 per Chemical Accident/Incident Control Team
- 4 per EOD Team
- 4 per Technical Escort Team

Navy/Air Force
- 6 per Medical ship (Navy)
- Other systems prioritized for high threat facilities & units

FY99 Accomplishments:

- Procured 2,341 ICAM
  Army.....1,907
  Navy.....20
  National Guard.....414
- Procured 274 ICAM Simulators (CAMSIM)
  Army.....36
  Navy.....6
  Air Force 94
  National Guard.....138

FY00 Objectives:

- Procure 3,112 ICAM for Army and 342 for National Guard
- Procure 52 CAMSIM for Army, 70 for Air Force, and 314 for National Guard

FY01 Objectives:

- Procure 3,003 ICAM for Army and 90 for National Guard
- Procure 52 CAMSIM for Army, 64 for Air Force, and 45 for National Guard

Acquisition Phase: Production, Fielding/Deployment, and Operational Support

Program Schedule

	FY98				FY99				FY00				FY01				FY02				FY03				FY04				FY05			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Other Events																																
FUE						●																										
Deliveries	●																							●								

Program Transition Strategy:

The ICAM is a Non Developmental Item (NDI) that was type classified, standard in August 1993. Prototypes were procured and tested under the Foreign Competitive Test (FCT) program in FY91 through FY93. The ICAM is being procured through a competitive multi-year contract, which was awarded in December 1995 to Intellitec, Inc., located in De Land, FL. ICAM will enhance the currently fielded CAM capabilities. The ICAM will be replaced by the Joint Chemical Agent Detector (JCAD).

Contractors:

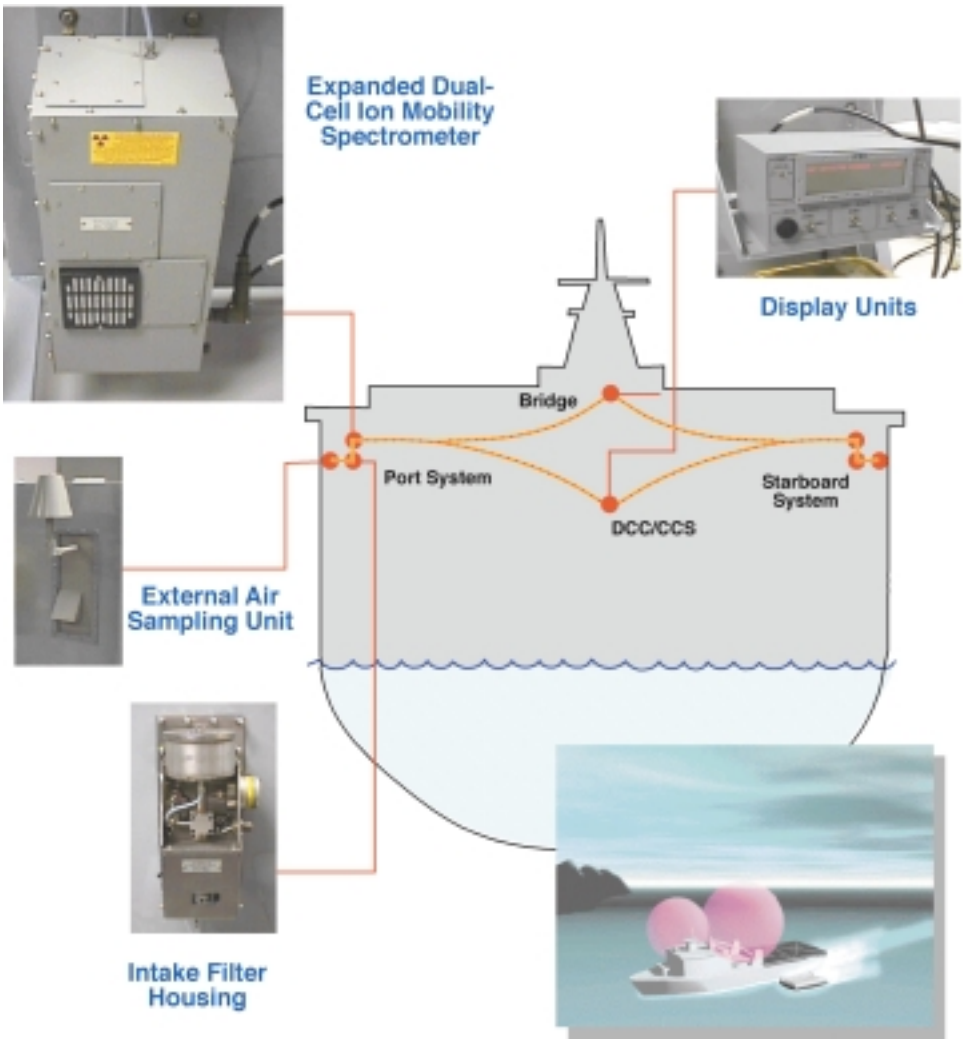
Intellitec Division
De Land, FL

Graseby Ionics, Inc.
United Kingdom (Royalties)

Improved (Chemical Agent) Point Detection System

Lead Service

- Automatically detects and identifies nerve and blister chemical warfare agent vapor
- Provides realtime monitoring of ship's exterior air
- Reduces false alarms due to advanced design
- Expandable algorithm for new and novel agent detection
- Replace Chemical Agent Point Detection System (CAPDS)



FY99 Accomplishments:

- Completed First Article Testing
- Initiated full-rate production
- Awarded follow-on contract
- Installed six IPDS systems aboard high value fleet assets
- Initiated development of Total Ownership Cost (TOC) reduction analysis

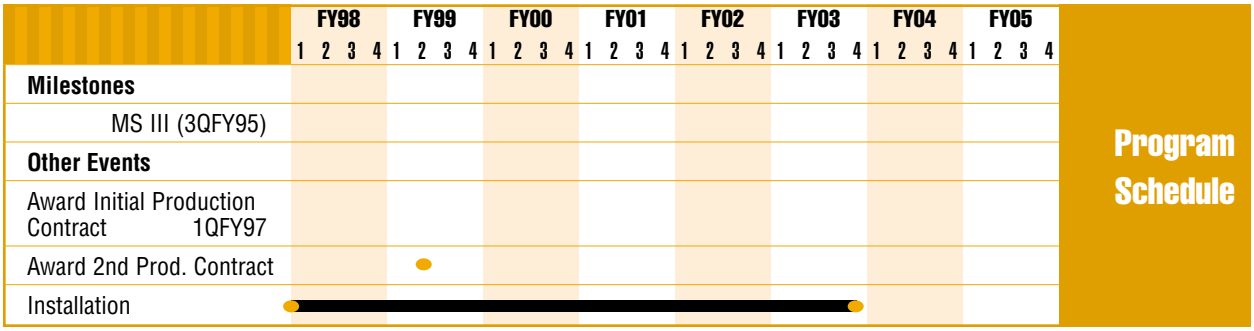
FY00 Objectives:

- Continue full-rate production
- Continue installation of production systems on all ship classes
- Complete TOC reduction analysis and initiate implementation planning
- Complete development of IPDS Interactive Electronic Technical Manual (IETM) and Interactive Course Ware (ICW)

FY01 Objective:

- Continue installation of production systems on all ship classes

Acquisition Phase: Production, Fielding/Deployment, and Operational Support

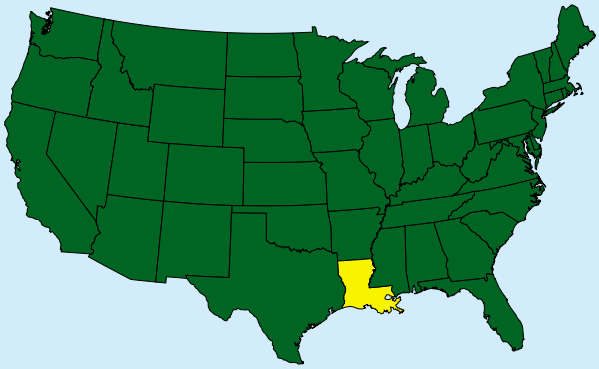


Program Transition Strategy:

IPDS is intended to replace the MK 21 MOD 1 CAPDS currently deployed in the fleet. Installation on all ship classes to be accomplished via Alteration Installation Teams (AIT) under the Fleet Modernization Program (FMP) Ship Alteration (SHIPALT) process.

Contractors:

Powertronics Systems, Inc.
New Orleans, LA



Joint Biological Point Detection System

Lead Service

- Provides common biological agent point detection capability for Individual Service Platforms
- Detects BW agents in less than 15 minutes
- Provides automated, knowledge-based, realtime detection, and identification
- Provides a point detection capability to the Air Force and Marine Corps
- Replaces Navy Integrated Biological Agent Detector (IBAD) and Army Biological Integrated Detection System (BIDS)

FY99 Accomplishments:

- Completed Pre-Production Qualification Testing (PPQT) and Initial Operation Test & Evaluation (IOT&E) planning for Block I
- Completed Block I Engineering Design Test (EDT) Safety Assessment and Human Factors test
- Completed Block I system integration for fabrication of Shipboard, Shelter, Fixed-site and Man Portable configurations
- Conducted concept development and design of candidate Block II biological-suite components
- Conducted analysis of potential Block II biological detector components

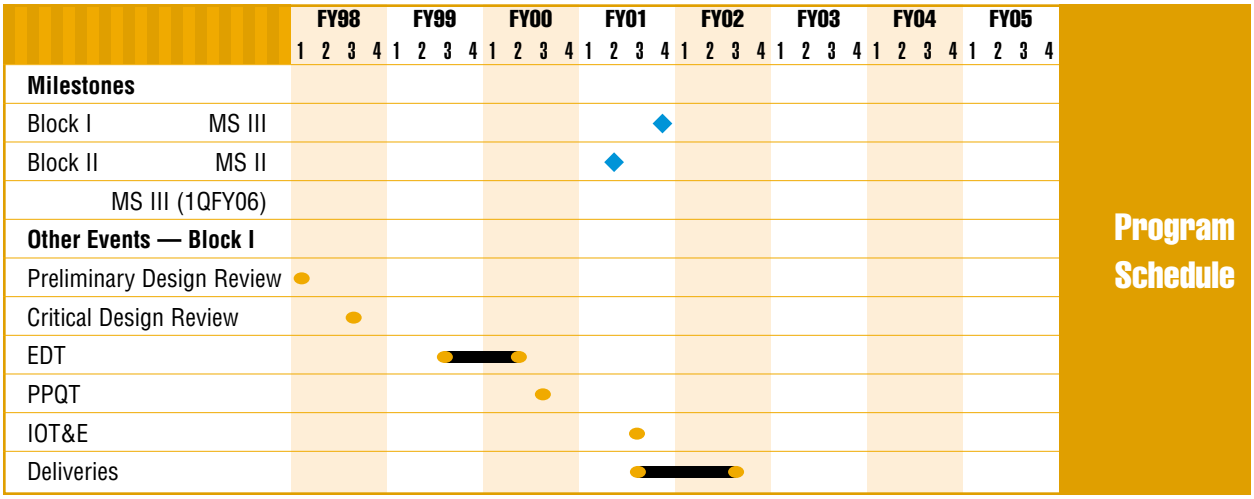
FY00 Objectives:

- Complete Biological Agent Warning Sensor (BAWS) design and integration
- Complete Block I ruggedization, PPQT, and EDT
- Conduct Joint Field Trial at Dugway Proving Ground, Utah
- Initiate Low Rate Initial Production (LRIP) and procure Block I suites for 3 Shipboard, 12 Shelter, 5 Fixed-site, and 5 Man Portable configurations

FY01 Objectives:

- Conduct Block I IOT&E
- Procure Block I suites for 13 Shipboard, 64 Shelter, 20 Fixed-site, and 46 Man Portable configurations
- Initiate common Biological Suite Enhancement Design Engineering efforts for Block II
- Award Block II developmental contract

Acquisition Phase: Blk I — Engineering and Manufacturing Development



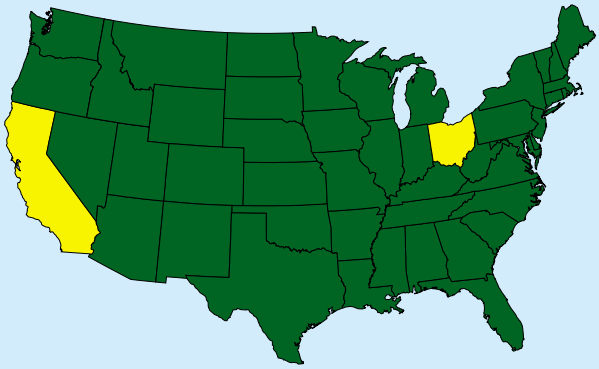
Program Transition Strategy:

The program is structured into two Block EMD phases. Block I EMD will provide the Services with automated detection and identification of BW agent capabilities. Block II will upgrade the Block I production suites to meet the objective requirements of the Joint Operation Requirements Document.

Contractors:

Battelle Memorial Institute
Columbus, OH

Lockheed Martin Librascope
Glendale, CA

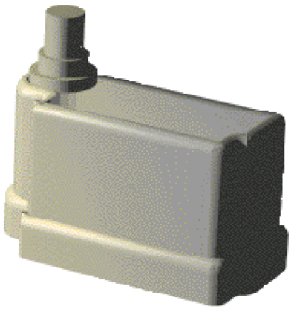


Joint Chemical Agent Detector

Lead Service

- Automatically detect, identify, and quantify chemical agents
- Lightweight and portable
- Interfaces with Joint Warning and Reporting Network (JWARN)
- Replaces service unique chemical agent detectors

Employs Surface Acoustic Wave (SAW) Technology



Pre-Concentrator - to Meet Low Level Detection Limits

Real-Time Monitor

Post-Attack Monitor

FY99 Accomplishments:

- Conducted Preliminary Design Review (PDR)
- Initiated and conducted surety testing and began Engineering Design Test (EDT) at Edgewood, MD

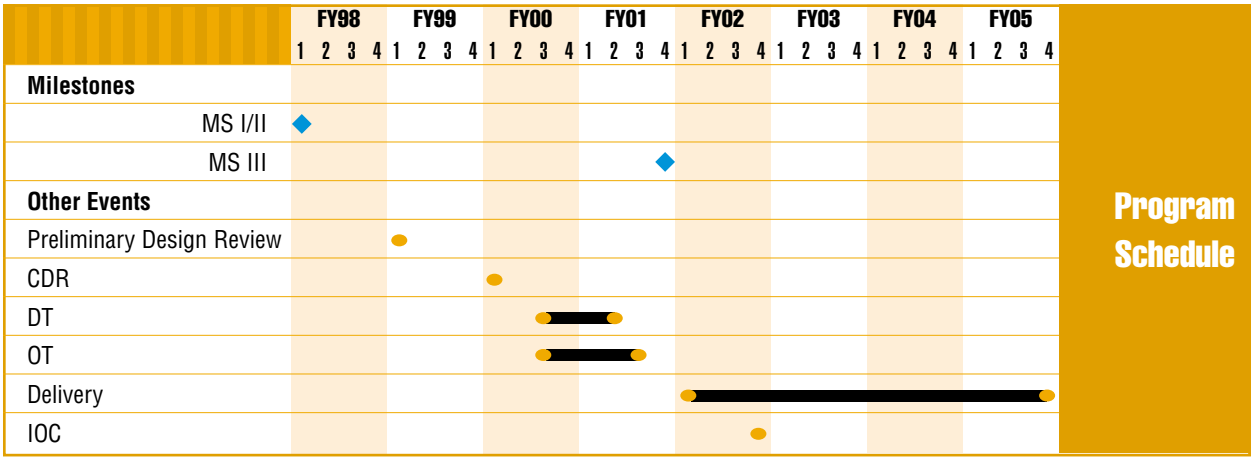
FY00 Objectives:

- Conduct Critical Design Review (CDR)
- Build JCAD hardware and software components, and conduct Development and Operational Testing (DT/OT)

FY01 Objective:

- Complete DT/OT, Pre-Production Qualification Test (PPQT), and field tests

Acquisition Phase: Engineering and Manufacturing Development

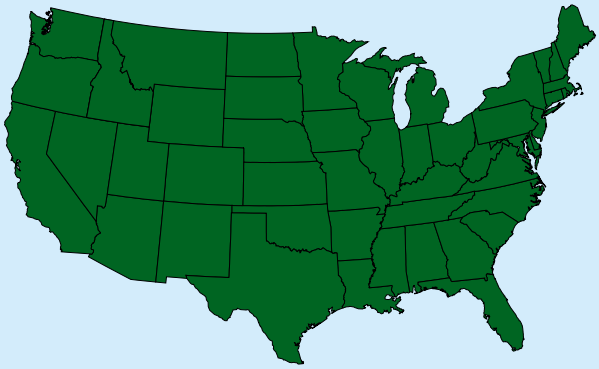


Program Transition Strategy:

JCAD will automatically detect, identify, and quantify chemical agents inside aircraft and shipboard interiors, providing hand-held monitoring capabilities, and alerting the individual soldier/sailor/airman/marine through the use of a pocket-sized detector and alarm. One detector configuration is planned for use on aircraft, shipboard, vehicles, and in personnel units/squadrons.

Contractors:

BAE
United Kingdom



Joint Service Lightweight Nuclear, Biological, Chemical Reconnaissance System

Lead Service

- An NBC detection and identification system
- Provides accurate and rapid NBC intelligence data by sampling, detecting, identifying, marking, and reporting the presence of NBC hazards within the unit's area of responsibility
- Consists of a base vehicle equipped with hand-held, portable and mounted, current and advanced NBC detection and identification equipment
- Equipped with a collective protection system, environmental control system, auxiliary power supply system, navigation system, meteorological data processing system, internal and external communication systems, and surface samplers
- Configured to allow full operation while deployed with the standard warning and reporting system and with vehicles now assigned to the receiving units.

LAV Variant

HMMWV Variant

FY99 Accomplishments:

- Completed Analysis of Alternatives (AoA) for HMMWV variant
- Completed Preliminary Design Review (PDR) and Critical Design Review (CDR)

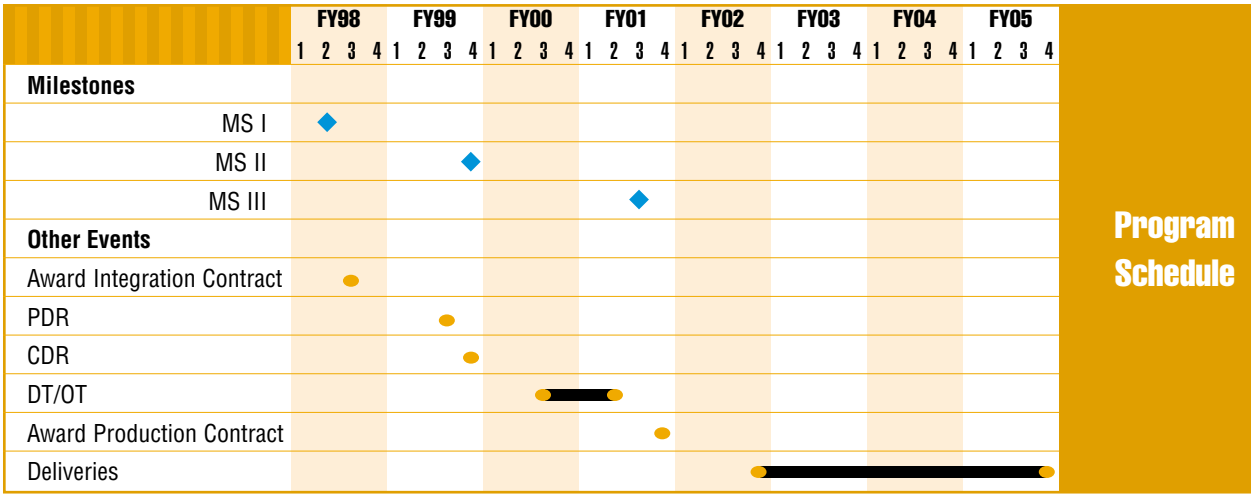
FY00 Objectives:

- Start integration of HMMWV variant
- Conduct HMMWV variant Engineering Design Test (EDT)

FY01 Objectives:

- Complete Technical Data Package (TDP)
- Complete Developmental Test (DT) and Operational Tests (OT)
- Procure 38 HMMWV variant and 7 LAV variant

Acquisition Phase: Program Definition and Risk Reduction

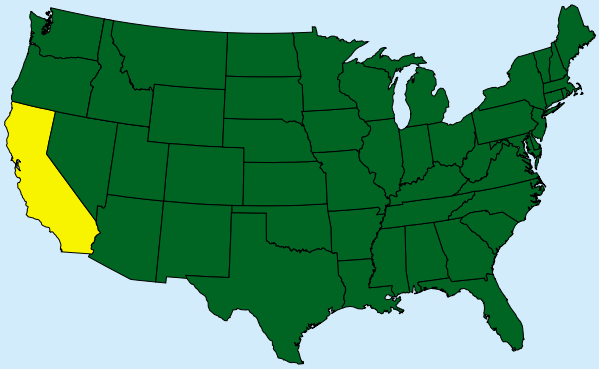


Program Transition Strategy:

This joint program follows a modified NDI strategy (integrating GFE, NDI, and systems undergoing development in parallel programs) into an integrated suite of detection, analysis, and dissemination equipment/software. There will be two variants of the JSLNBCRS: the High Mobility Multipurpose Wheeled Vehicle (HMMWV) variant and the Light Armored Vehicle (LAV) variant. The base vehicle provides the mobility for the NBC equipment suite and the crew.

Contractors:

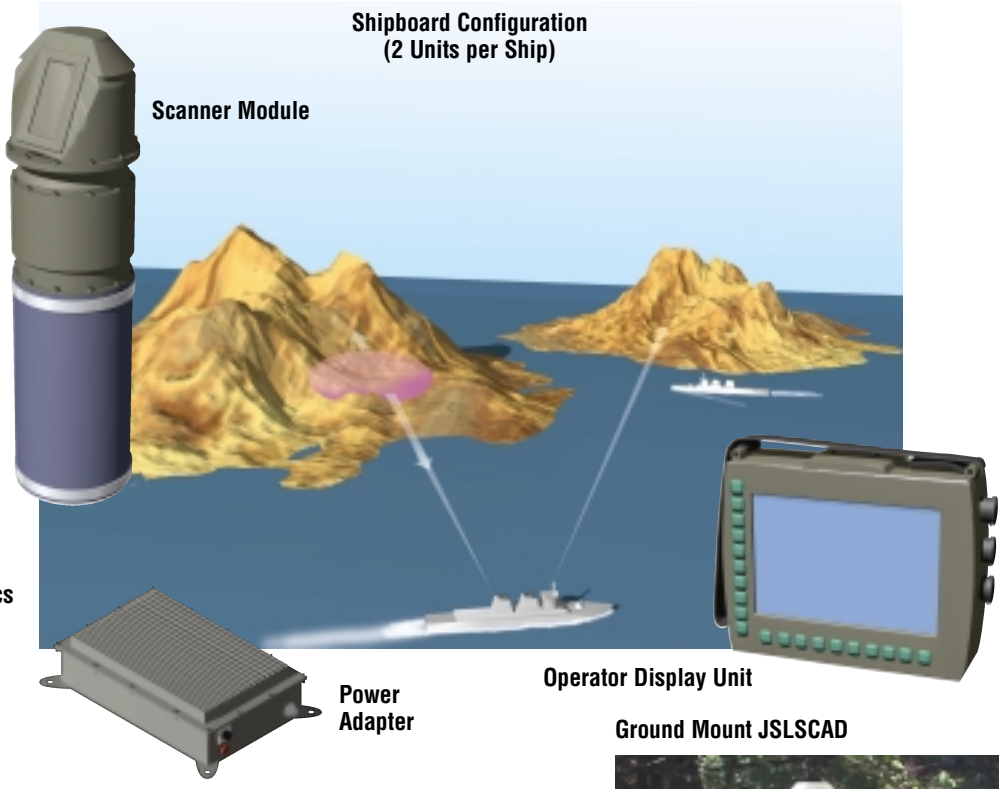
TRW (Tactical Systems Division)
Carson, CA



Joint Service Lightweight Standoff Chemical Agent Detector

Lead Service

- Provides on-the-move, automatic standoff chemical agent detection
- Mounts on Service platform(s) to include selected Naval vessels, aircraft, and fixed sites
- Detects and alarms to a chemical agent vapor cloud up to 5 Km in range
- Replaces the M21 Remote Sensing Chemical Agent Alarm (RSCAAL)



Ground Mount JSLSCAD

Vehicle Mounted JSLSCAD

Vehicle Mounted JSLSCAD

FY99 Accomplishments:

- Initiated fabrication of Engineering Design Test (EDT) articles
- Conducted Preliminary and Detailed Design Reviews (PDR & DDR)
- Completed software and Chemical Agent Detection Support Environment (CADSE) tests

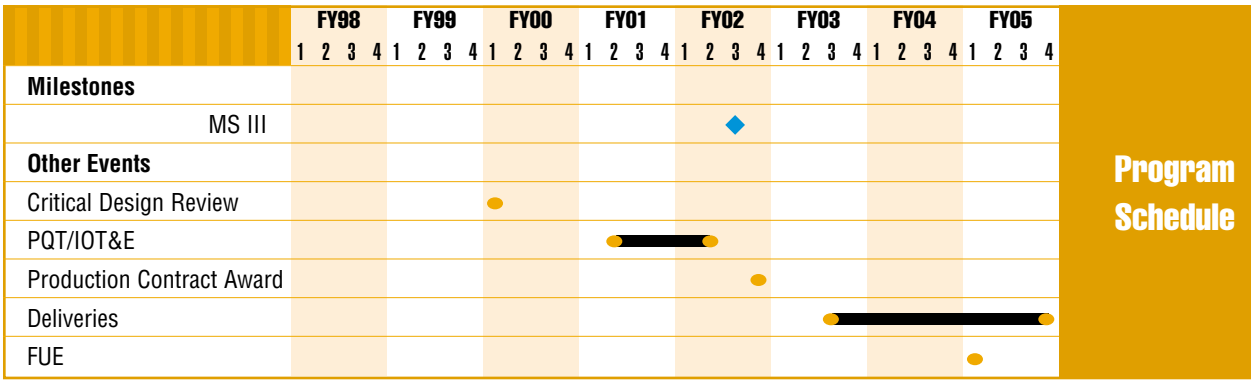
FY00 Objectives:

- Deliver EDT hardware and software
- Conduct Critical Design Review (CDR)

FY01 Objective:

- Fabricate prototypes for Production Qualification Testing/Initial Operational Test and Evaluation (PQT/IOT&E)

Acquisition Phase: Engineering and Manufacturing Development



Program Transition Strategy:

Installation on selected ships to be accomplished via Alteration Installation Teams (AITs) under the Fleet Modernization Process (FMP) SHIPALT process. The Army, Air Force, and Marine Corps will ensure design for integration and installation on selected reconnaissance platforms.

Contractors:

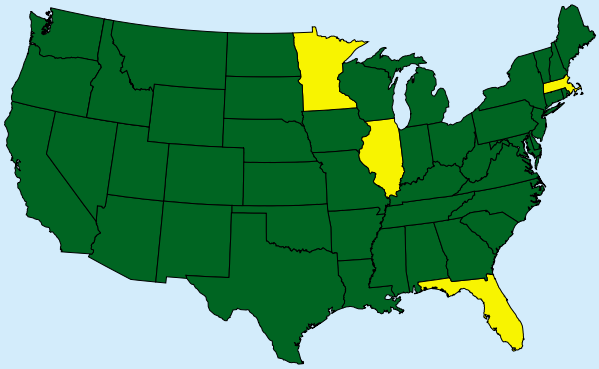
Intelletic
De Land, FL

Dual, Inc.
Lake Mary, FL

Honeywell Technology Center
Minneapolis, MN

OPTRA, Inc.
Topsfield, MA

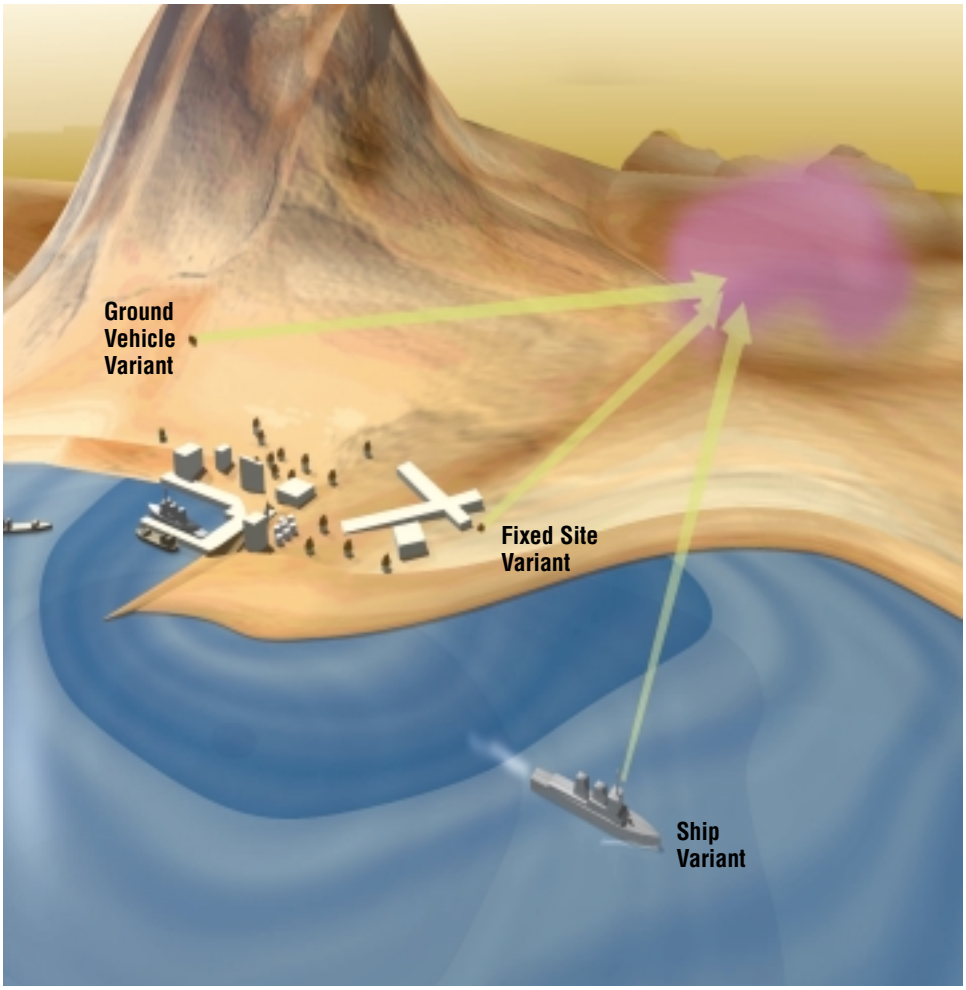
Recon/Optical, Inc.
Barrington, IL



Joint Service Warning and Identification LIDAR Detector

Lead Service

- Standoff detection and identification of chemical agent vapors, aerosols, and droplets
- Contamination mapping and tracking
- Realtime dewarning or information on agent type, concentration, and precise location
- Mounts on service platform(s) to include selected Naval vessels, ground vehicles, and fixed sites
- Interfaces with the Joint Warning and Reporting Network (JWARN)
- Complements the Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD)



FY99 Accomplishments:

- Techbase, technology exploration

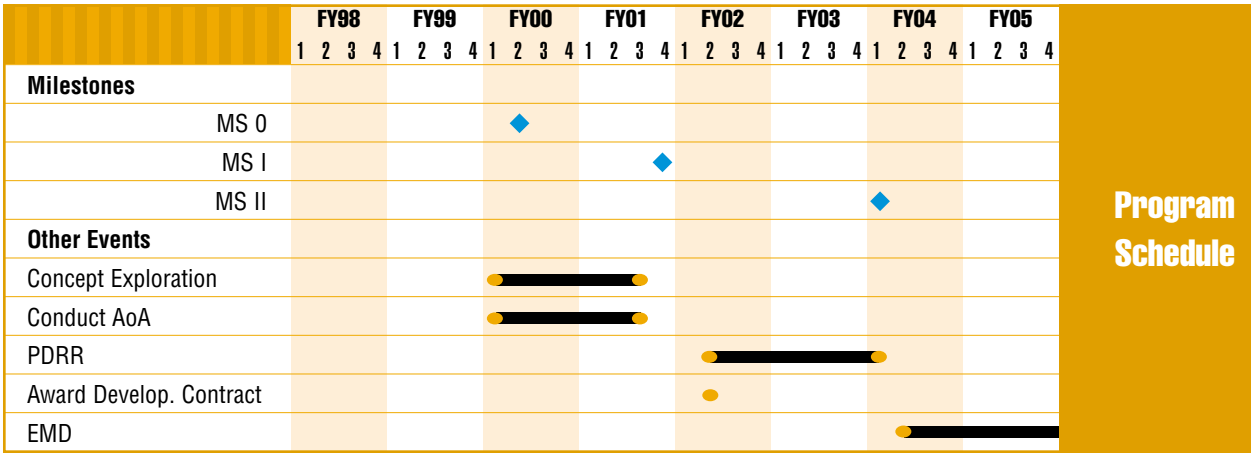
FY00 Objectives:

- Stand up program office
- Establish Overarching Integrated Product Team (OIPT)
- Begin concept exploration (CE)

FY01 Objectives:

- Conduct studies to validate technology alternatives and prepare for release of Request for Proposal (RFP) for prototype development contract
- Complete Analysis of Alternatives (AoA) and develop draft performance specifications

Acquisition Phase: Concept Exploration

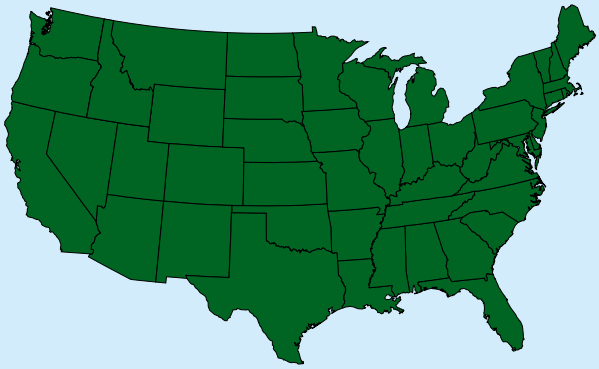


Program Transition Strategy:

JSWILD will be a real time, modular, standoff detection, and identification system that will search, detect, track, and identify chemical agent aerosols, rain, and vapor clouds at ranges up to 40 kilometers (km) or more. Additionally, the system will map surface contaminants. A program name change to Artemis has been proposed but not approved.

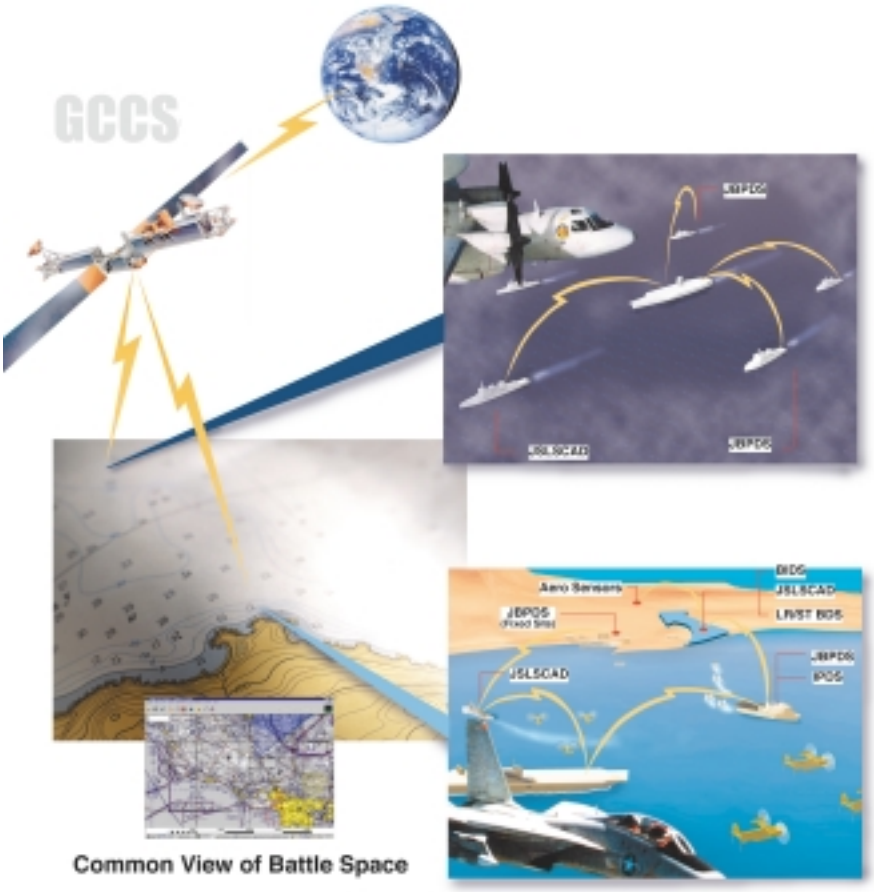
Contractors:

TBD



Joint Warning and Reporting Network

Lead Service



Common View of Battle Space

Program Transition Strategy:

JWARN is a three phase program:

- **Block I** Interim Standardization (IS) is the initial procurement and fielding of Commercial-Off-The-Shelf (COTS) and Government-Off-The-Shelf (GOTS) software to standardize NBC warning and reporting throughout the Army, Navy, Marine Corps, and Air Force.
  - Block Ia : COTS NBC Analysis software for DOS based and GOTS hazard prediction models software.
  - Block Ib : COTS NBC Analysis software with Automated Nuclear, Biological and Chemical Information System (ANBACIS) Battlefield Management functionality for the US Army Maneuver Control System/Phoenix.
  - Block Ic : COTS NBC Analysis software with ANBACIS Battlefield Management functionality for Windows 32 bit environment and GOTS hazard prediction models software.
- **Block II** Block Upgrade (BU) provides the total JWARN capability by integrating NBC detector systems, NBC Warning and Reporting Software Modules and NBC Battlefield Management software modules into the Services' Command, Control, Communications, Computer and Intelligence Information (C4I2) systems.
- **Block III** Product Improvement Proposal/Program (PIP).

FY99 Accomplishments:

- Conducted source selection and RFP evaluation for Engineering Manufacturing Design (EMD) BLK II
- Awarded BLK Ib and Ic software contract
- Demonstrated interoperability of BLK I software in Joint C4I systems
- Demonstrated transfer of data from a detection system to tactical intranet

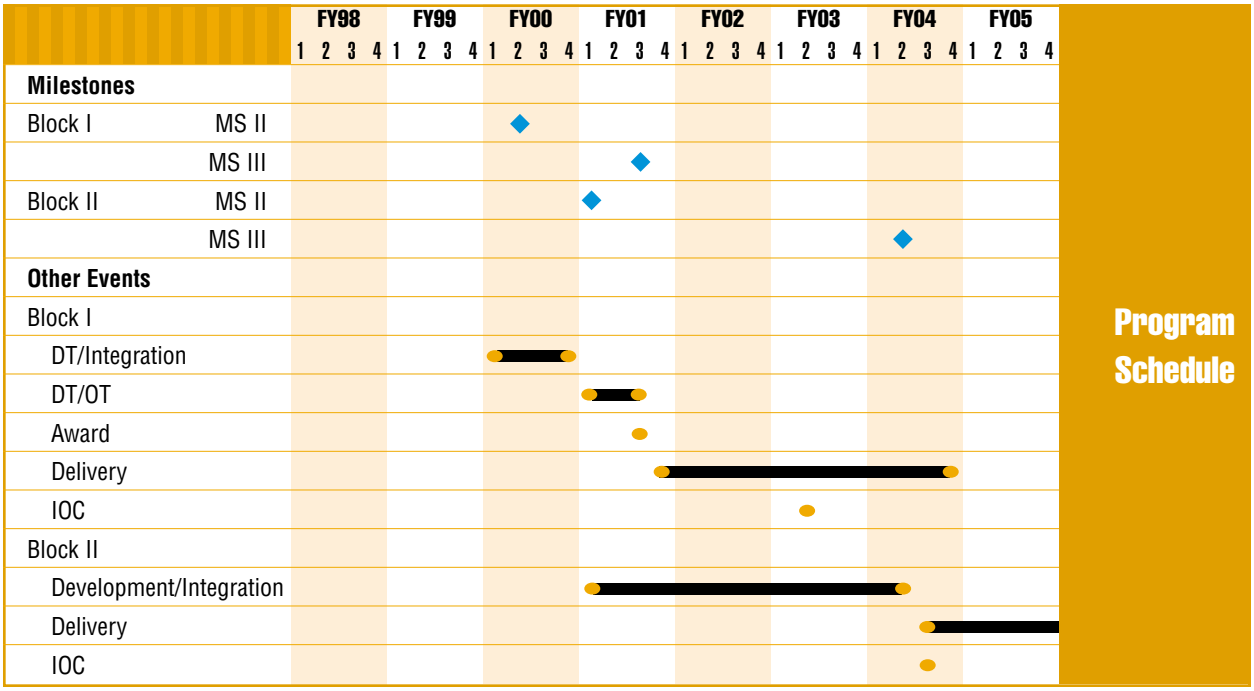
FY00 Objectives:

- Conduct BLK II MS II and award EMD contract
- Deliver BLK Ib and Ic software packages
- Conduct Preliminary and Critical Design Reviews (PDR & CDR)

FY01 Objectives:

- Develop NBC warning and reporting and battlespace management modules for Joint Service C4I Systems
- Start Developmental and Operation Tests (DT/OT) of BLK II C4I software modules and interfaces

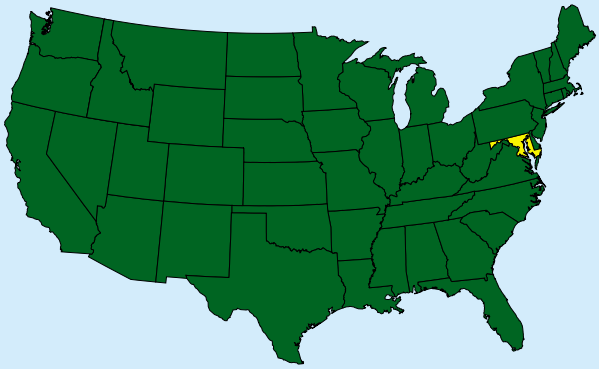
Acquisition Phase: Engineering and Manufacturing Development



Contractors:

Block I:
BRUHN NEWTECH
Columbia, MD

Block II:
TBD



NBC Reconnaissance System Modifications

Lead Service

- **High speed, high mobility armored carrier capable of performing NBC reconnaissance throughout the battlefield**

Basis of Issue Highlights:

Army

- 6 per Heavy Division Chemical Co.
- 6 per ACR Chemical Co.
- 36 per Corps, TAACOM NBC Recon Co.
- 1 per Separate Brigade

FY99 Accomplishments:

- Procured kits for 12 BLK I systems
- Installed 13 BLK I systems

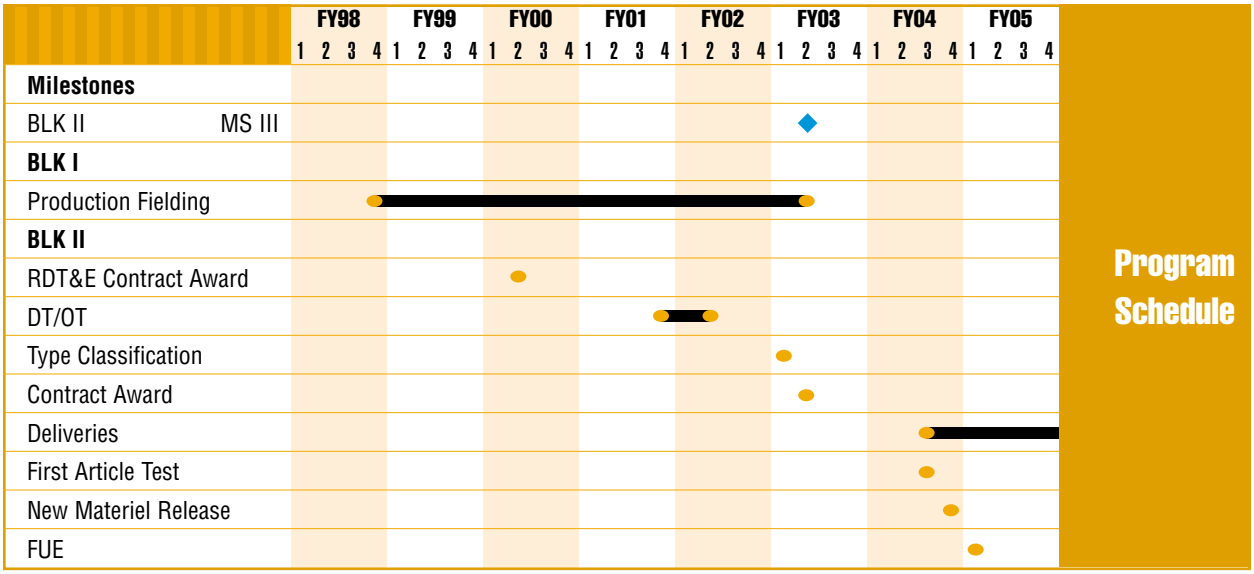
FY00 Objectives:

- BLK I — Fabricate 2 Fox NBCRS training systems
- BLK I — Procure 11 systems
- BLK II — Award Engineering Design Test (EDT) contract

FY01 Objectives:

- BLK I — Procure 13 systems
- BLK II — Fabricate 4 prototype systems
- BLK II — Conduct system test and evaluation

Acquisition Phase: Production, Fielding/Deployment, and Operational Support



Program Transition Strategy:

The currently fielded M93 and M93A1 are wheeled armored vehicles equipped with a fully integrated NBC detection, warning, and communications capability. The Block II Mod is an integration and test effort with an enhanced sensor suite. Production efforts from FY97-FY02 are for Block I Mods to 87 systems; funding from FY00-FY03 is for Block II upgrade integration and design. Production efforts from FY03-FY05 are for Block II Mods for 49 systems.

Contractors:

Block I

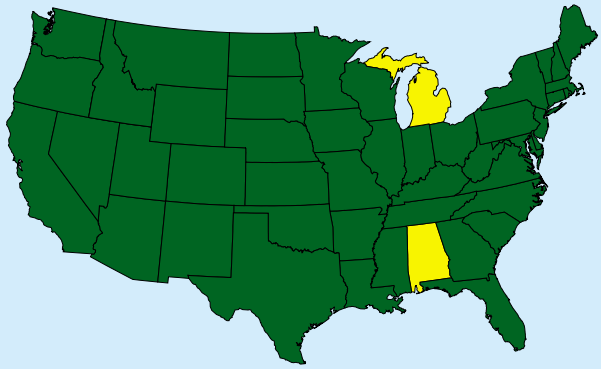
Anniston Army Depot
Anniston, AL

General Dynamics Land Systems Division
Detroit, MI

Henschel Wehrtechnik
Germany

Bruker-Franzen
Germany

Block II — TBD



Joint Service Fixed Site Decontamination (JSFXD)

Lead Service

- Enables decontamination of fixed sites, ports of entry, airfields, logistics nodes and key command and control centers
- A family of decontaminants and applicators
- Nontoxic and noncorrosive

FY99 Accomplishments:

- Initiated characterization studies of mature technologies
- Initiated biological efficacy and compatibility study
- Conducted live agent decontamination testing

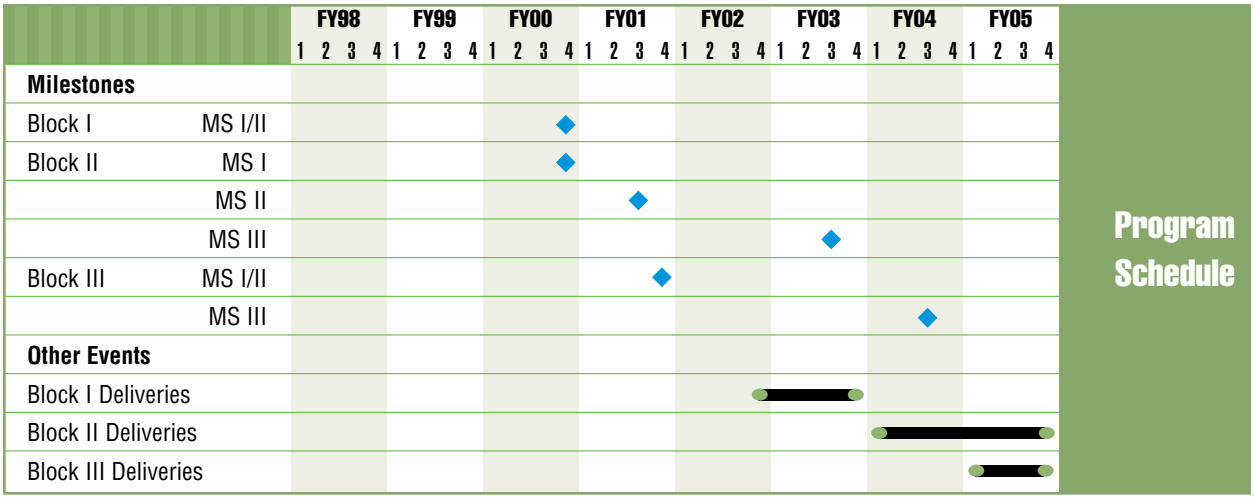
FY00 Objectives:

- Conduct technology definition and assessment of Commercial-Off-The-Shelf (COTS)/Non Developmental Items (NDIs) Decontamination equipment and decontaminants for Block III
- Prepare MS I documentation for selected candidate equipment for Block II
- Conduct technology definition and assessment of development technologies

FY01 Objectives:

- Procure and test prototype decontaminants to meet the casualty decontamination requirements
- Begin testing of casualty decontaminants to support FDA approval
- Prepare documentation for MS I/II for Block I and Block III
- Award Block I competitive prototype contract
- Conduct initial evaluation of competitive prototypes

Acquisition Phase: Block I — Engineering, Manufacturing and Development

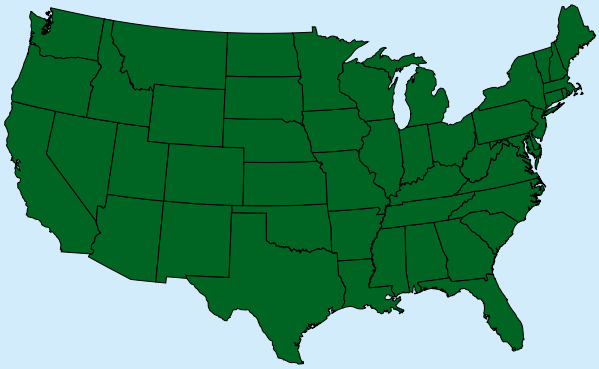


Program Transition Strategy:

The JSFXD program consists of a family of decontaminants and a family of applicators that provide each service with the capability to decontaminate a fixed site and restore mission operations. The program is divided into three overlapping blocks. Block I will evaluate, review, and test NDI, COTS and mature technology decontaminants, and field those that meet the requirements of the Joint Operational Requirements Document (JORD). Block II will focus on developing a family of decontaminant applicator subsystems that will be capable of dispensing the selected family of decontaminants. Block III will develop decontaminants and applicators for skin/casualties with open wounds.

Contractors:

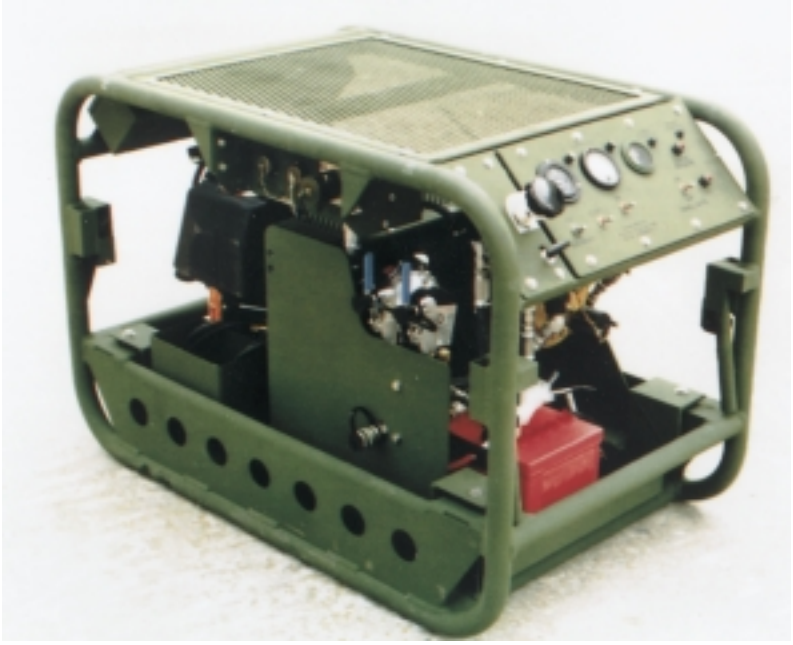
TBD



Modular Decontamination System

Lead Service

- **MDS will be used to limit the spread of NBC contamination on the battlefield**
- **MDS will replace the M12A1 Skid Mounted Decon Apparatus**



Basis of Issue Highlights:

Army

- 1 per squad — Chemical Co. Smoke/Decon

FY99 Accomplishments:

- Awarded production contract
- Procured 64 Modular Decontamination Systems

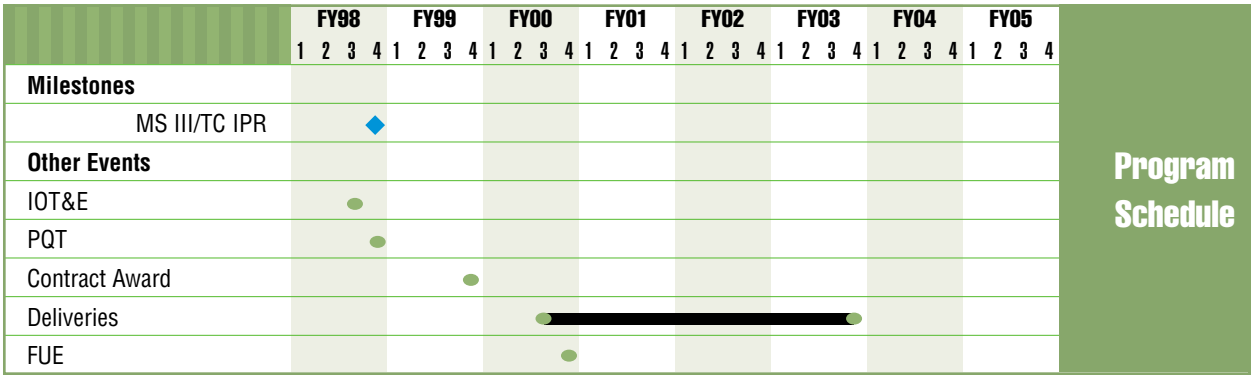
FY00 Objective:

- Procure 74 Modular Decontamination Systems

FY01 Objective:

- Procure 130 Modular Decontamination Systems

Acquisition Phase: Production, Fielding/Deployment, and Operational Support

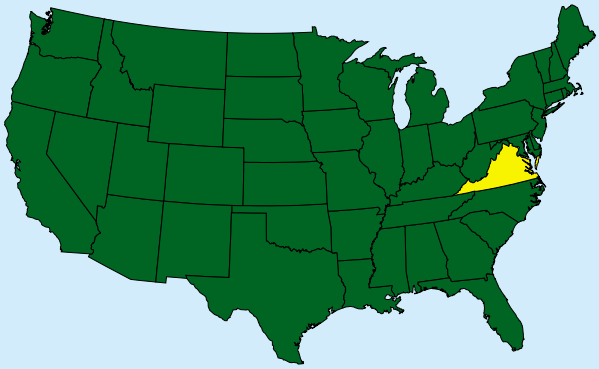


Program Transition Strategy:

MDS consists of one M21 Decontamination Pumper (DP) module, and two M22 High Pressure Washer (HPW) modules. The M21 DP is capable of delivering DS2 or liquid field expedient decontaminants, i.e., formalin, household bleach, and diesel fuel. The M21 DP may be operated from the ground; when trailer mounted, it can draw the decontaminant directly from a container on the ground. Its accessories include hoses and hose reels, two trigger-controlled spray wands, and two electrically powered scrub brush assemblies. The M22 HPW will provide ambient or heated water at pressures up to 3,000 psi at a rate of 5 gpm with the capability of injecting detergents and providing a high volume flow of (20 gpm) water. The M22 HPW will be capable of drawing water from natural water sources and delivering it at variable adjustable pressures, temperatures, and flow rates. The hydrant adapters will provide connections for using urban water supplies.

Contractors:

Centech Group, Inc.
Alexandria, VA



Sorbent Decontamination System

Lead Service

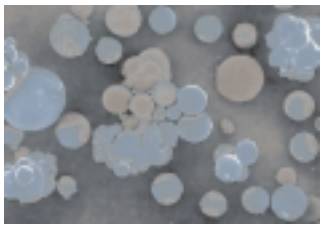
- Noncorrosive, nonaqueous decontaminant
- Increased reactivity and capacity
- Reduced off-gassing and contact hazards
- Potential replacement for current DS2 decontaminant

Replacement for:

M-11 Spray Unit

M-13 Spray Unit

Highly Adsorptive, Reactive Powder



M24 Sorbent Decontamination System

Personal Wipedown Mitts (BDU Pocket-sized Packet)

FY99 Accomplishments:

- Built Engineering Design Test (EDT), Production Qualification Test (PQT), and Initial Operational Test (IOT) hardware for operator's wipe down
- Conducted Engineering Change Proposal (ECP) for adoption of the sorbent into the M295 Personnel Equipment Decontamination kit
- Conducted in-process review for adoption of the sorbent as a standard military decontaminant

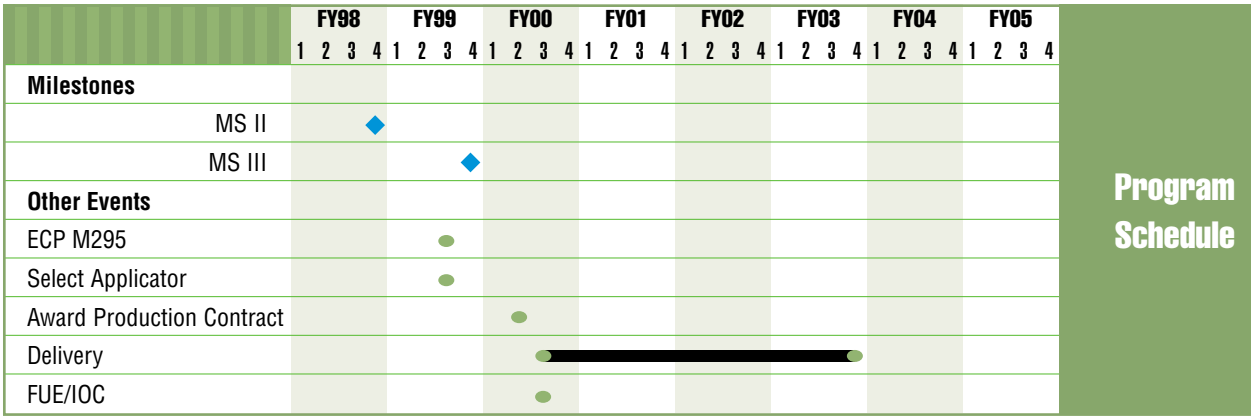
FY00 Objectives:

- Develop Technical Data Package (TDP) and build EDT hardware for operator spray down system
- Award production contract and procure 17,000 M24 Sorbent Systems

FY01 Objectives:

- Produce prototype hardware of M291 skin decontamination kits with sorbent
- Conduct developmental and operational testing (DT/OT) for skin decontamination system
- Procure 40,000 M24 Sorbent Systems

Acquisition Phase: Engineering and Manufacturing Development

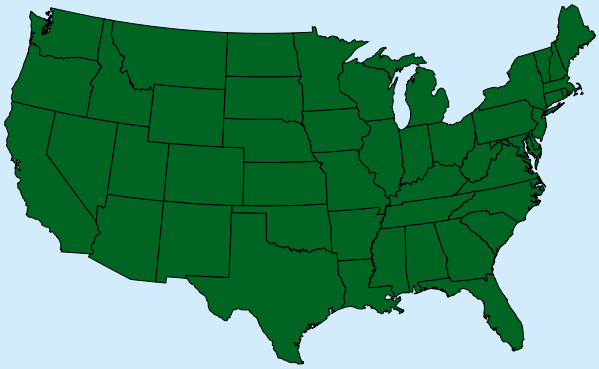


Program Transition Strategy:

This program consists of two separate systems for personal wipedown operations and operator spraydown operations. Sorbent Decon is an immediate decontaminant that is superior to the XE555 carboneous and ion exchange resin mix currently used in the M295 kit. The new adsorbent eliminates DS2 from the operator's spraydown procedures. The key requirements for the sorbent are a reduction in off-gassing and contact hazard associated with the adsorbent after use when compared to the M295 kit. The adsorbent is environmentally acceptable, noncorrosive, stable and usable over a wide temperature range, and can be carried and used safely by the soldier. Sorbent Decon will be used by the soldier to decon personal equipment, key areas of vehicles, and crew-served weapons. Also, it will eliminate the transfer hazard, and, therefore, preserve MOPP integrity.

Contractors:

TBD



Joint Aircrew Protection (JPACE/JSAM)

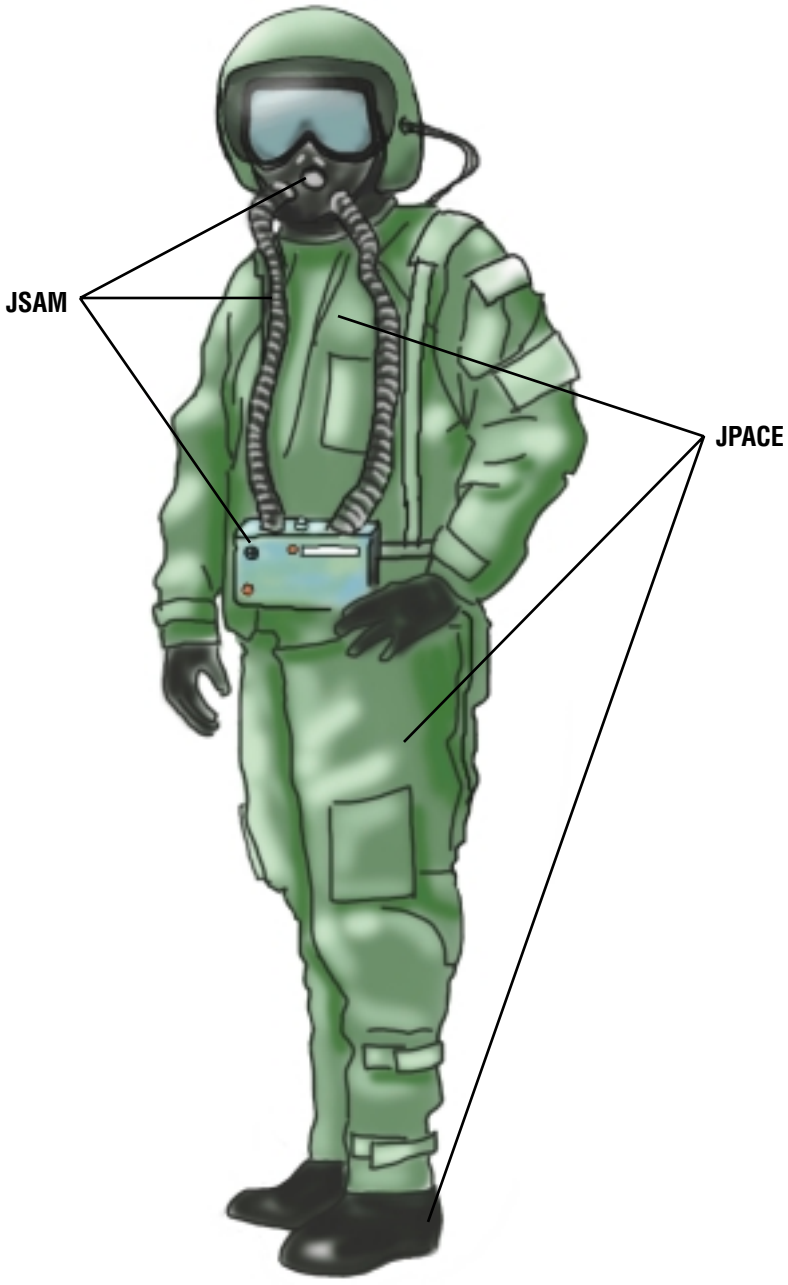
Joint Protective Aircrew Ensemble/Joint Service Aircrew Mask

Lead Service

- Increased chemical agent protection
- Increased service life
- Reduced thermal burden
- Coordinated program development

JPACE

JSAM



FY99 Accomplishments:

- Drafted JPACE acquisition plan and Test and Evaluation Master Plan (TEMP)
- Completed JPACE baseline testing
- Completed first downselect of JPACE prototype suits

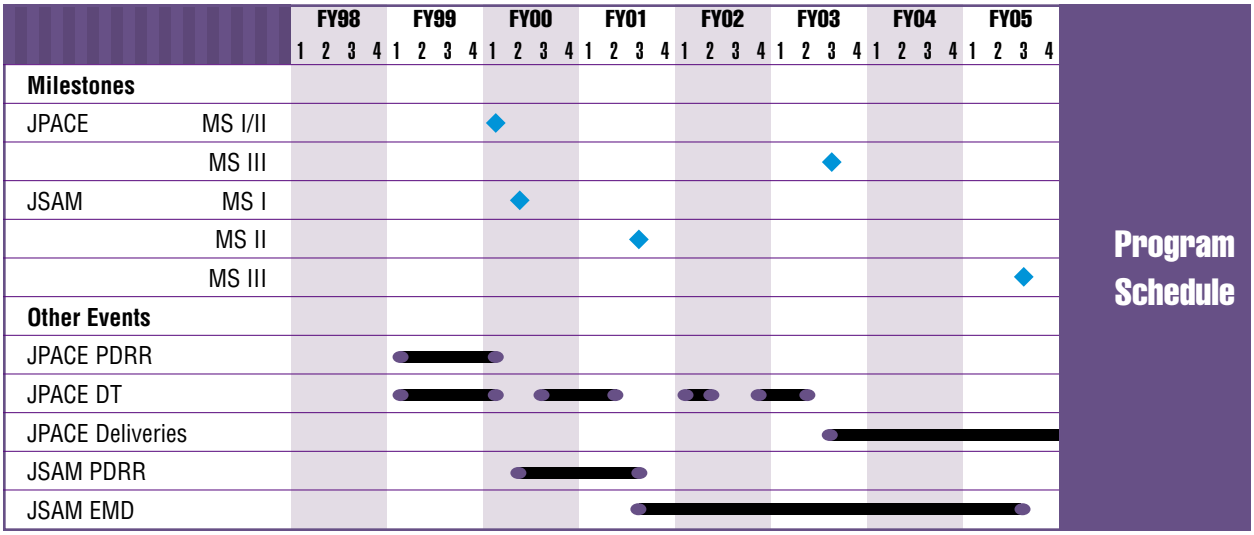
FY00 Objectives:

- Conduct JSAM source selection and award developmental contract
- Fabricate 25 JPACE prototypes for Developmental Testing (DT)

FY01 Objectives:

- Procure 20 JSAM prototypes
- Conduct JPACE DT
- Procure 100 JPACE prototypes for Operational Testing (OT)

Acquisition Phase: Engineering and Manufacturing Development



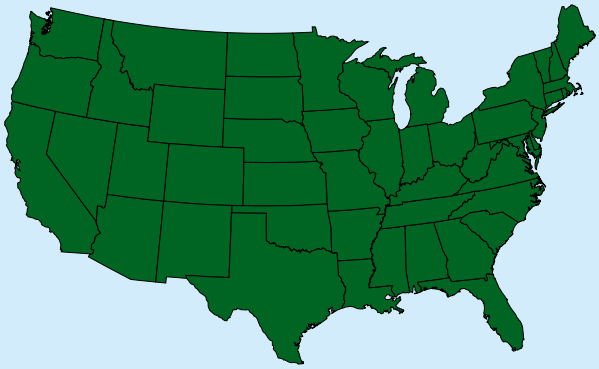
Program Acquisition Strategy

JPACE — Conduct CBD material search for advanced material technologies addressing aviation material performance requirements for JPACE. Leverage JSLIST P3I advanced material testing and technologies to maximum extent possible. Prepare formal solicitation for materials/components development. Manufacture prototypes for developmental and operational testing.

JSAM — Conduct early industry involvement to determine state of the technology base. Development will be conducted in two phases. Anticipate award of PDRR phase to best two contractors to perform initial design; followed by downselect to one to complete EMD development, DT and OT testing.

Contractors:

TBD



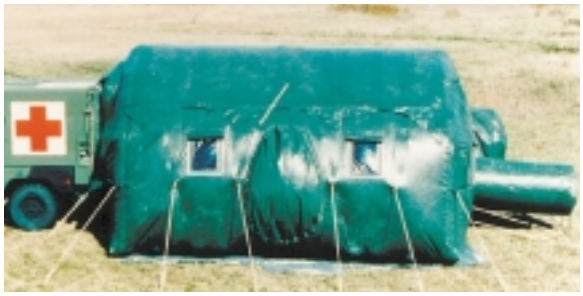
Chemically and Biologically Protected Shelter

Lead Service

Program Description:

The CBPS is designed to provide a contamination free, environmentally controlled work area for a Battalion Aid Station moving up to three times per day or a Division Clearing Station moving once every three days. The CBPS will be an integrated, self-contained system consisting of a dedicated Heavy High Mobility Multipurpose Wheeled Vehicle (HMMWV) Heavy Variant (HHV); a 300 square foot air beam supported soft shelter; and required utility support components to include NBC filtration, environmental control and power generation.

The CBPS also includes a Lightweight Multipurpose Shelter (LMS) mounted on the back of the HHV and a high mobility trailer with a 10 kW Tactical Quiet Generator (TQG) for auxiliary power to be towed by the HHV. The HHV and LMS provide room for four passengers and their gear. The CBPS can be operational in less than 20 minutes with four personnel. All power required to support operations of the system will be operated off the HHV engine or the TQG.



FY99 Accomplishments:

- Procured 37 CB Protective Shelters
- Conducted Customer User Test

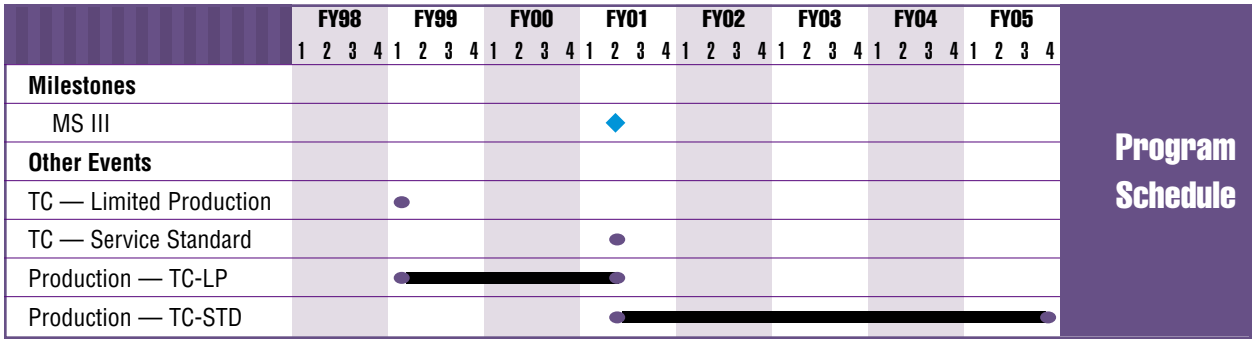
FY00 Objectives:

- Conduct Initial Operation Test & Evaluation (IOT&E) Phase II to support Type Classification (TC)
- Procure 30 CB Protective Shelters

FY01 Objectives:

- Type Classification for standard Service use
- Procure 26 CB Protective Shelters

Acquisition Phase: Production, Fielding/Deployment, and Operations Support



Program Transition Strategy:

Production will transition from limited procurement urgent to full production upon MS III approval.

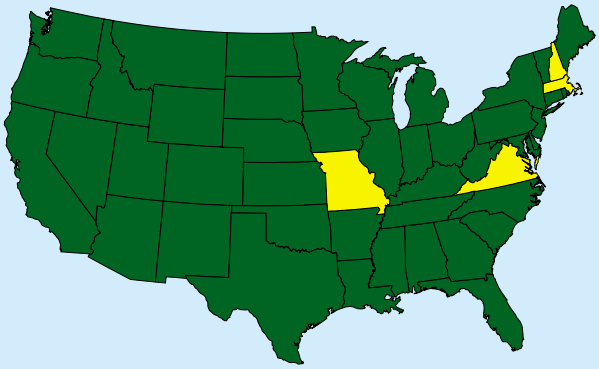
Contractors:

Chemfab Corporation
Merrimack, NH

Engineering Air Systems, Inc.
St. Louis, MO (Prime)

Federal Fabrics — Fibers, Inc.
North Chelmsford, MA

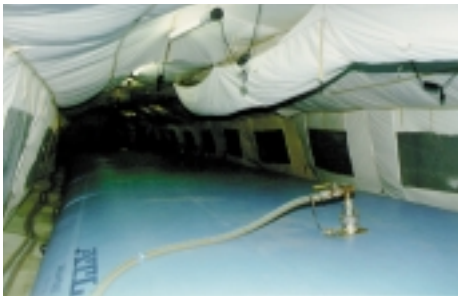
Marion Composites
Brunswick, VA



Chemically Protected Deployable Medical System/Chemically Hardened Air Transportable Hospital

Lead Service

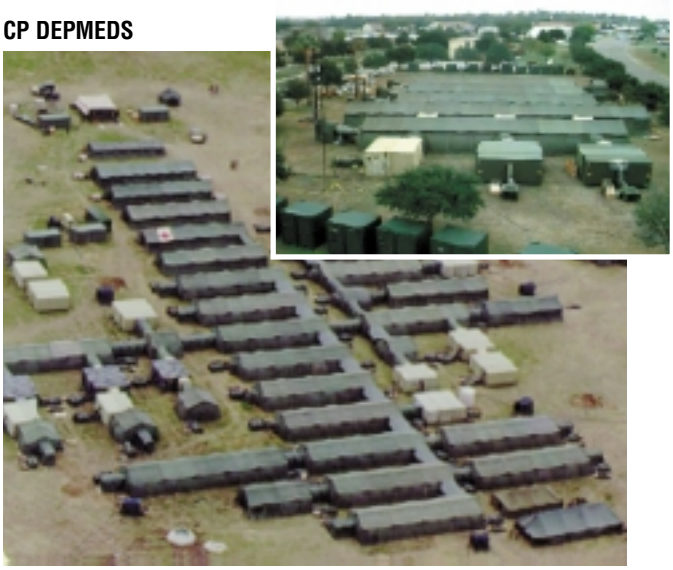
CB hardened environmental control unit with M28 chemical filters and blowers



CB hardened water distribution system

CHATH

CP DEPMEDS



Pressure gauge with differential pressure alarms

CB hardened latrines

Patient Processing Unit (PPU)

FY99 Accomplishments:

- M28 CPE deliveries completed for major components
- Established prepared Requests for Proposals (RFP)
- Obtained refurbished ISO Shelters and latrine components for CB latrines

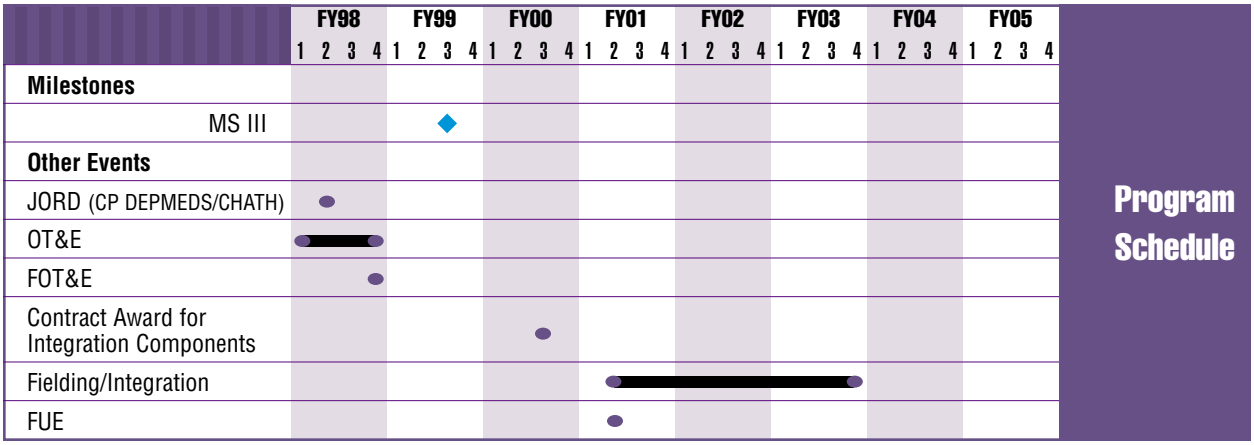
FY00 Objectives:

- Conduct fielding and sustainment Working Integrated Product Team (WIPT)
- Milestone III decision
- Initiate integration of CP DEPMEDS into Chemical Casualty Training Course
- Award contract for integration components
- Procure 3 CP DEPMEDS systems and integrate into field hospitals

FY01 Objective:

- Procure 8 CP DEPMEDS systems and integrate into field hospitals

Acquisition Phase: Production, Fielding/Deployment, and Operational Support



Program Transition Strategy:

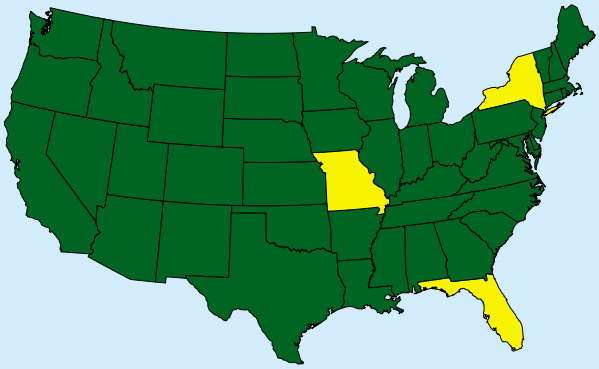
CP DEPMEDS is a kit that will be fielded with selected fielded DEPMEDS hospitals to convert the hospital into a fully operational, environmentally controlled, collectively protected medical treatment facility. The following components are required to be added to existing DEPMEDS hospitals to provide a fully operational, collectively protected field hospital: M28 Simplified Collective Protection Equipment, CB hardened International Standard Organizational (ISO) shelter seals, CB protected water distribution system, CB protected latrines, low pressure alarms, and CB protected environmental control units and heaters.

Contractors:

Engineering Air Systems, Inc.
St. Louis, MO

Intellitec
De Land, FL

Keco Industries, Inc.
Florence, KY



Joint Service General Purpose Mask

Lead Service

- Improved CB protection
- Improved field of view
- Lower breathing resistance
- Reduced weight/bulk

FY99 Accomplishments:

- Received MS I approval
- Finalized performance specification and issued request for proposal
- Established developmental test and evaluation baseline testing program

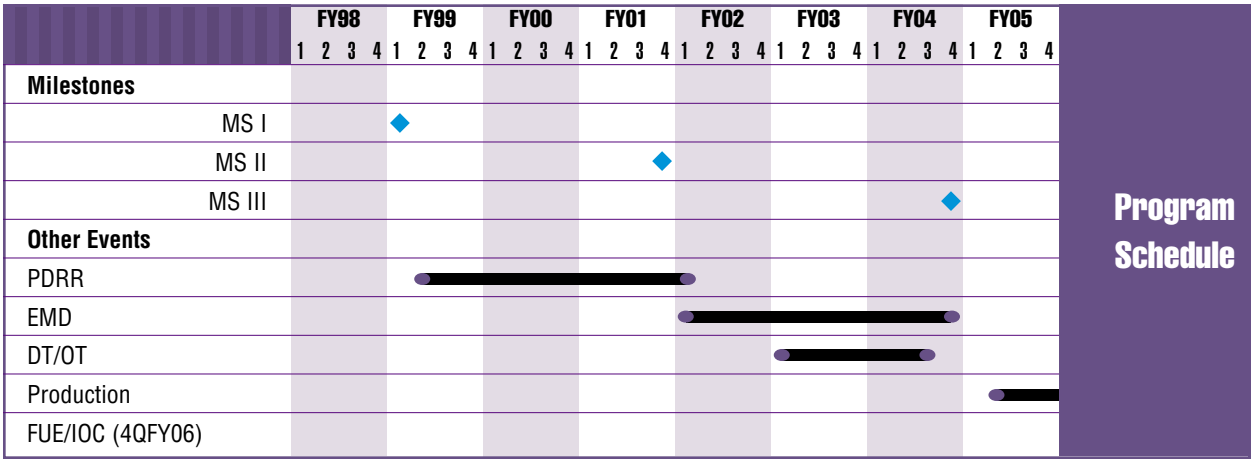
FY00 Objectives:

- Award developmental contract and procure 250 prototypes
- Conduct sustainment study for logistic support

FY01 Objectives:

- Continue developmental test and evaluation
- Preparing for awarding of Engineering Manufacturing & Development (EMD) contract option

Acquisition Phase: Program Definition and Risk Reduction

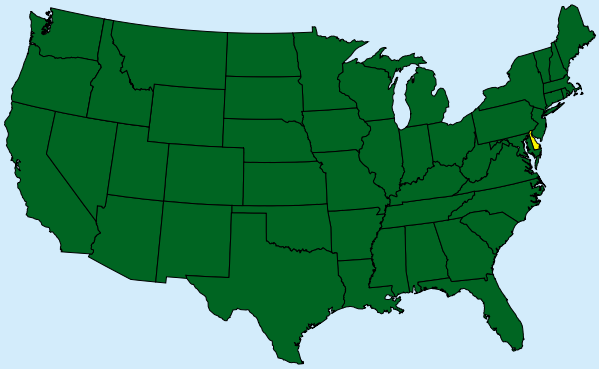


Program Transition Strategy:

The Acquisition Strategy (AS) is a combined full scale development (Program Definition and Risk Reduction and Engineering and Manufacturing Development) and production with Contractor Logistics Support (CLS). The AS was approved 19 October 1998. The contract for development/production is based on a Joint Service performance specification with special emphasis on the lowest total ownership cost.

Contractors:

TBD



Joint Service Lightweight Integrated Suit Technology

Lead Service

- Increases chemical protection for Joint Services
- Reduces heat stress
- Improves fit (reduced bulkiness)
- Extends wear and launderability
- Replaces Battle Dress Overgarmant (BDO), Chemical Protective Overgarment (CPO), and Saratoga (USMC Chemical Suit)

FY99 Accomplishments:

- Completed P3I materiel screening, test analysis, and candidate selection
- Procured P3I prototypes and began field evaluation
- Procured 361,515 JSLIST suits
- Awarded production contract for Multipurpose Overboot (MULO)

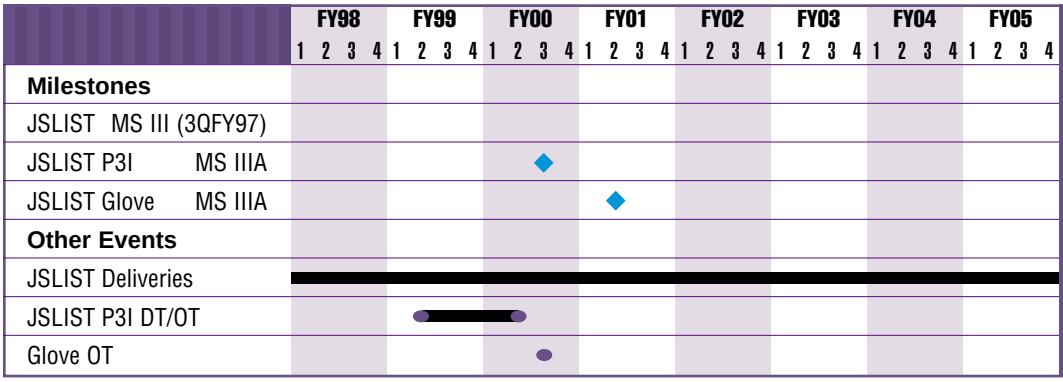
FY00 Objectives:

- Procure 359,166 JSLIST suits
- Conduct development and operation assessment of candidate JSLIST Glove materiel

FY01 Objective:

- Procure 330,871 JSLIST suits

Acquisition Phase: Production, Fielding/Deployment, and Operational Support



Program Transition Strategy:

The Navy will replace current inventory through Coordinated Shipboard Allowance List (COSAL) outfitting. The Marine Corp will replace current inventory through table of equipment attrition. The Army will stock JSLIST suits in a war reserve category for contingency operations. Suit issue will occur when sufficient stock exists and the operational commander orders issuance of such material when justified by perceived threat. Air Force ensembles will be collected in tariff quantities until installations' complement has been reached. Shipments to each installation are in priority order based on the time-phased deployment data (TPDD) for the forces supporting EUCOM, CENTCOM and PACOM areas of responsibility. Replaced BDOs will be fielded through the USAF supply system to fill needs of lower priority units.

Contractors:

Creative Apparel
Belfast, ME

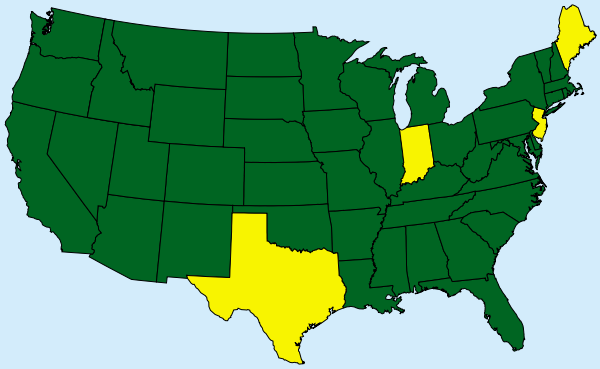
Group Home Foundation (NISH)
Belfast, ME

NCED (NISH)
El Paso, TX

Tingley Rubber, Inc.
South Plains Field, NJ

Tradewinds Rehabilitation Center (NISH)
Gary, IN

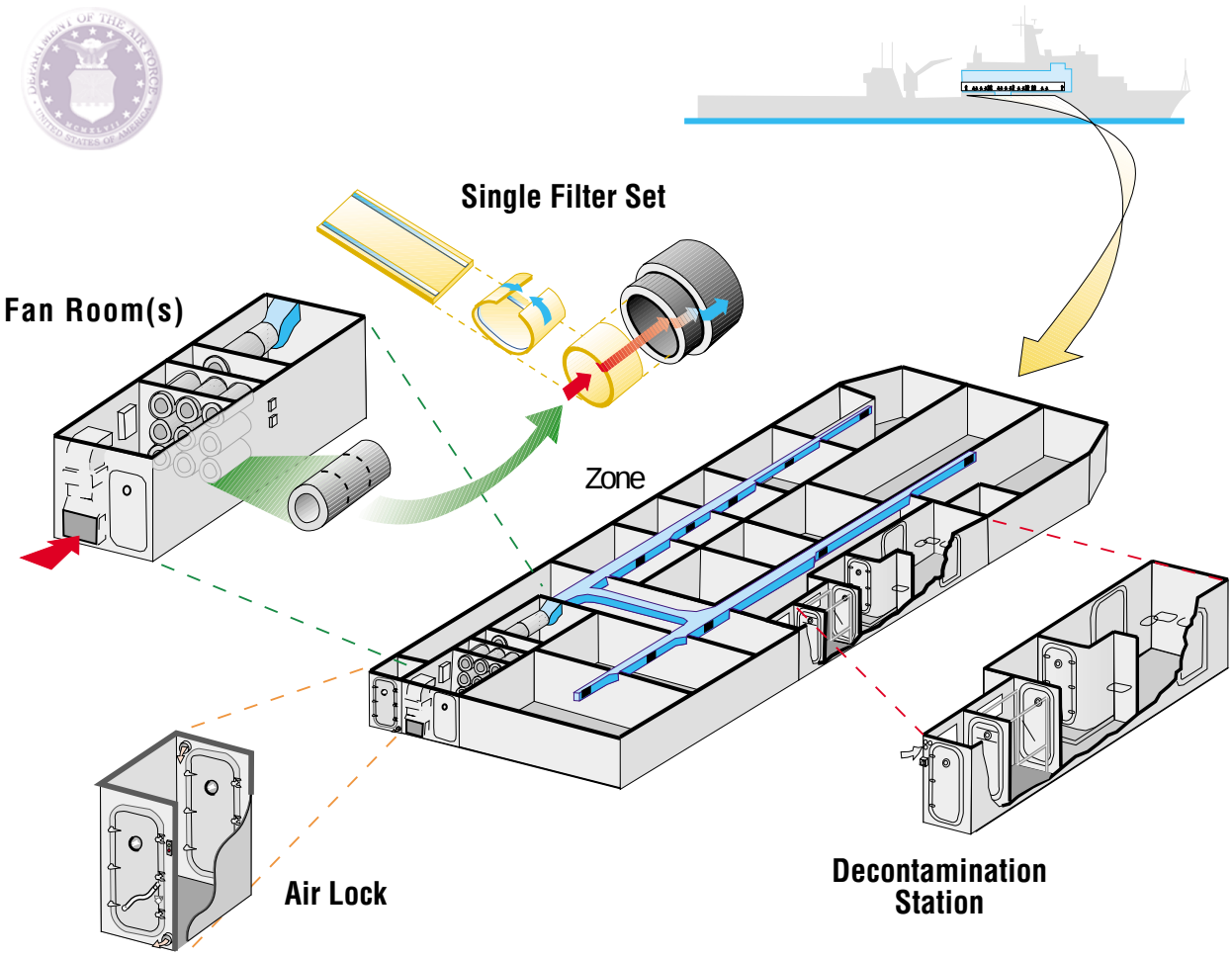
NISH — National Institute for the Severely Handicapped



Shipboard Collective Protection System & Equipment

Lead Service

- Provides ships with a contamination-free environment within specified zone boundaries
- Mission-essential operations and life sustaining functions can be performed during and after a CB attack
- Provides Pre-Planned Product Improvements (P3I) to the current shipboard Collective Protection System (CPS)/ Selected Area Collection Protection System (SACPS) by decreasing logistics costs, extending filter life, reducing shipboard maintenance requirements, and providing energy-efficient fans



FY99 Accomplishments:

- Continued long-term shipboard testing of new longer-life laminated High Efficiency Particulate Absorbing (HEPA) filters, pre-filters and Limited Protection (LP) HEPA filter
- Completed fan rotor specification package to improve fan efficiency. Began testing prototype CPS fans
- Initiated amphibious CPS backfit modification process to include: ship surveys, engineering design analysis, development of Shipboard Installation Drawing (SID) packages, development of modular installation packages, and planning for procurement and logistic warehousing

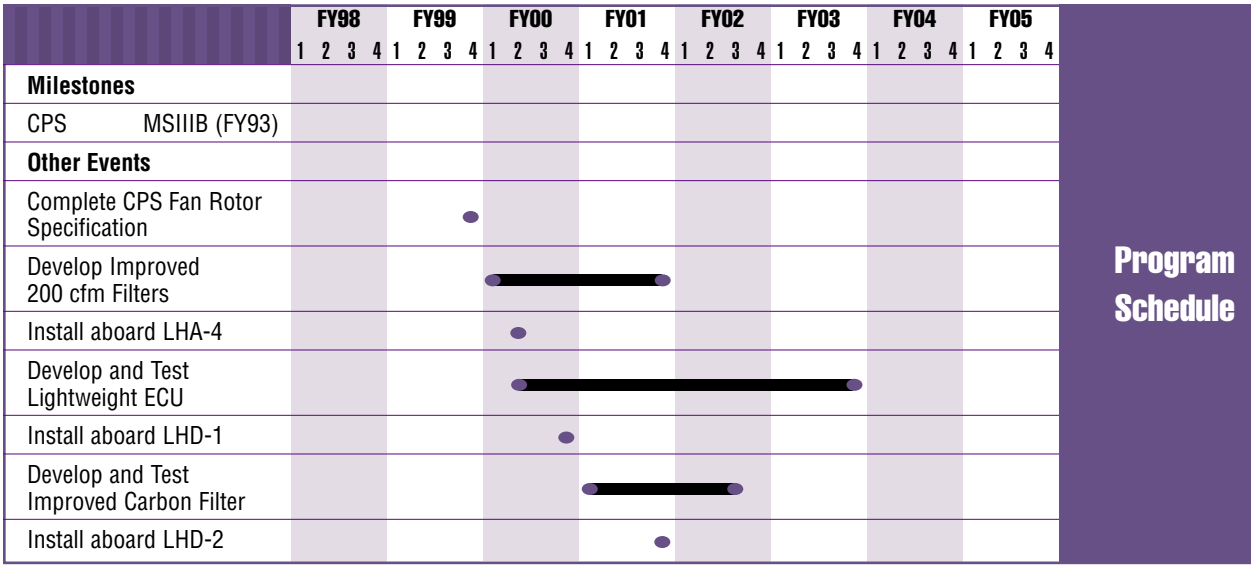
FY00 Objectives:

- Continue development and testing of the pre-filters and long-life HEPA filters in order to establish a statistically significant database for assessing the long-term performance of these improvements. Complete land-based testing and begin shipboard testing of CPS fan rotors.
- Perform tradeoff analysis to improve the M48A1 and M56 carbon filters. Perform tradeoff analysis to improve motor blowers on Modular Collective Protection Equipment and M20A1 Simplified Collective Protection Equipment. Begin redesign of the M49 Fixed Installation Filter (FIF) to reduce production costs
- Initiate installation of CPS in command and control spaces aboard the USS Peleliu, (LHA-5)

FY01 Objectives:

- Continue testing of CPS fan rotors on designated ships. Continue long-term testing of shipboard filter improvements. Prepare and update documentation (test reports, Tech Manuals and TDP)
- Begin development and test of improved motor blowers to improve efficiency, reliability, size, and weight. Continue development and testing of lightweight ECU for transportable collective protection systems
- Initiate installation of CPS in command and control and medical spaces aboard the USS Wasp (LHD-1) and the USS Essex (LHD-2)

Acquisition Phase: Production, Fielding/Deployment, and Operational Support



Program Transition Strategy:

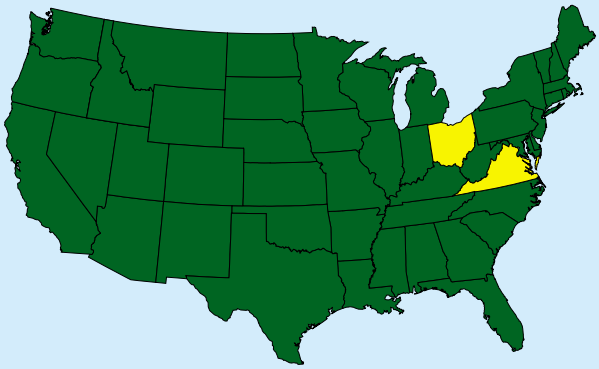
Filter modifications will be procured directly from ship operating funds, (O&M,N) as a direct replacement for existing filters. New fans will be procured as part of new ship construction using Ship Conversion, Navy (SCN) funds. CPS backfit installation aboard high priority amphibious ships was funded as a result of the 1997 Quadrennial Defense Review (QDR).

Contractors:

New Philadelphia Fan Company
New Philadelphia, OH

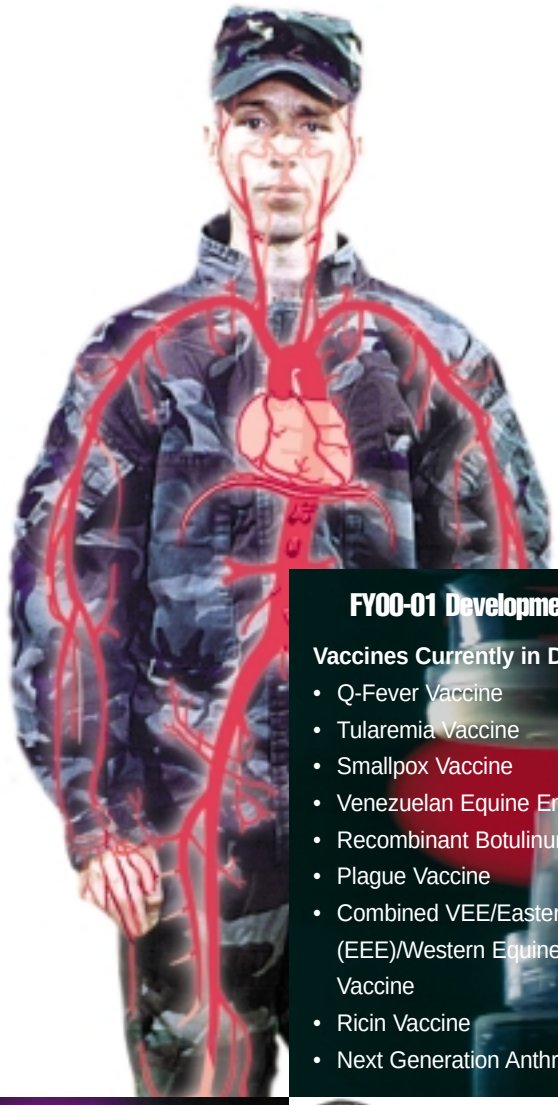
New World Assoc., Inc.
Fredericksburg, VA

Science & Technology Research
Dahlgren, VA



Medical Biological Defense Vaccines

Lead Service



FY00-01 Developmental Countermeasures

Vaccines Currently in Development

- Q-Fever Vaccine
- Tularemia Vaccine
- Smallpox Vaccine
- Venezuelan Equine Encephalitis (VEE) Vaccine
- Recombinant Botulinum Vaccine
- Plague Vaccine
- Combined VEE/Eastern Equine Encephalitis (EEE)/Western Equine Encephalitis (WEE) Vaccine
- Ricin Vaccine
- Next Generation Anthrax Vaccine

Joint Program Office for Biological Defense (JPO BD)

Joint Vaccine Acquisition Program (JVAP)

U.S. Army Medical Research and Materiel Command (USAMRMC)

FY99 Accomplishments and Deliverables:

USAMRMC — Technology Base

- Completed research necessary for MSI decisions to transition recombinant vaccine candidates against botulinum neurotoxin serotypes A, B, C, E, and F and the VEE IA/B infectious clone vaccine candidate out of tech base to advanced development (Phase I, Program Definition & Risk Reduction).
- Obtained MS0 decision to transition the plague F1-V antigen (fusion protein) vaccine candidate to Phase 0 (Concept Evaluation)
- Demonstrated in animal models the first vaccine candidate to induce protection against Marburg virus
- Compared protective efficacy of live attenuated and subunit vaccine candidates against Brucella
- Constructed models for multi-agent vaccines using viral replicon, bacterial-vectored, and naked DNA vaccine constructs

JPO BD — Advanced Development/Procurement

- Continued advanced development efforts for vaccines against Q fever, tularemia, and smallpox
- Transitioned VEE and botulinum vaccines to advanced development
- Pursued licensure of a new Vaccinia Immune Globulin (VIG) product while filing an IND for interim use of existing product
- Managed the DoD anthrax vaccine procurement program
- Supported vaccine req'ts for Phase I of SECDEF's Anthrax Immunization Program

FY00/01 Objectives:

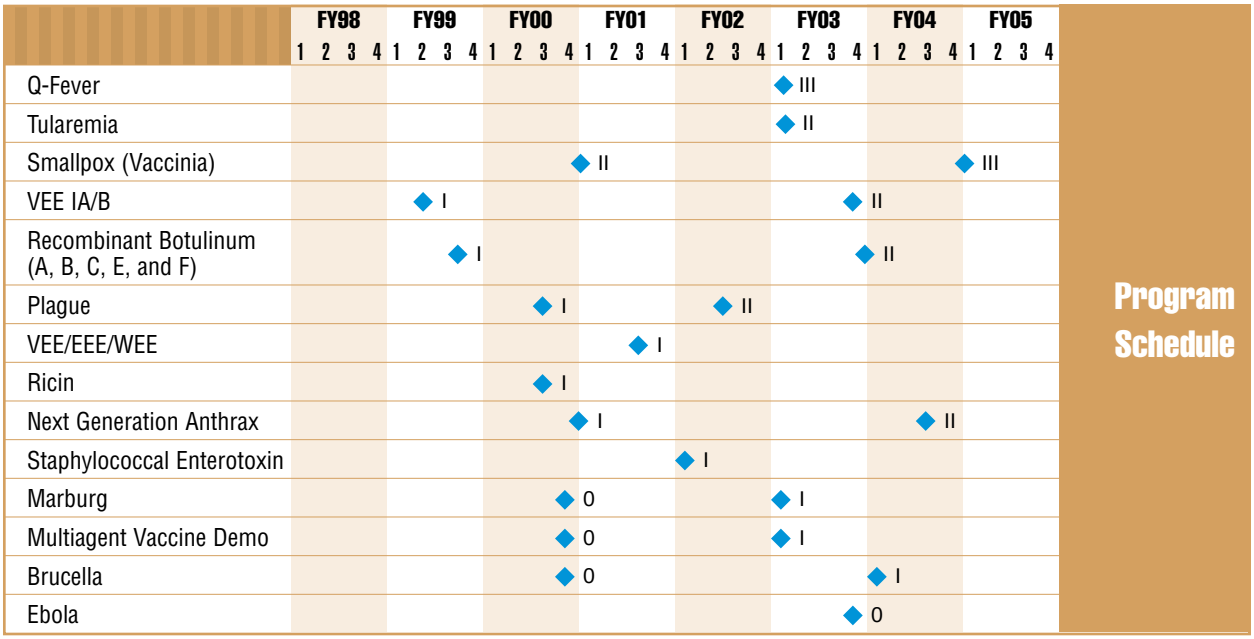
USAMRMC — Technology Base

- Prepare scientific documentation to transition a staphylococcal enterotoxin B vaccine candidate to advanced development
- Complete EEE and VEE IIIA vaccine constructs and assessment of VEE IE, VEE IIIA, EEE, and WEE vaccine candidates in small animal models
- Determine components to be incorporated into multi-agent vaccine delivery systems
- Evaluate immunomodulation as a potential biological threat agent countermeasure approach
- Explore laboratory formulations of glanders vaccines
- Evaluate interference effects and test efficacy of components intended for use in multi-agent vaccine delivery systems

JPO BD — Advanced Development/Procurement

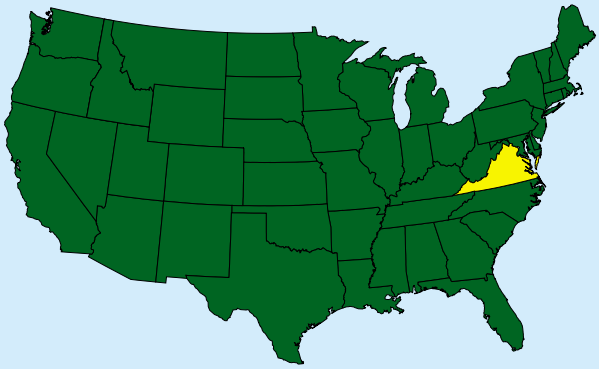
- License new VIG product
- Continued advanced development efforts for vaccines against Q fever, tularemia, smallpox, VEE, and botulinum
- Transition plague and ricin vaccines to advanced development
- Continue to manage the DoD Anthrax vaccine acquisition program
- Continue support of vaccine requirements for Phase I of SECDEF's Anthrax Immunization Program
- Obtain licensure for the renovated anthrax vaccine production facility

Schedule: Partial List of Vaccines in Advanced Development and the Technology Base



Contractors:

DynPort
Reston, VA



Medical CW/BW Information Products

Lead Service

Program Description:

The US Army Medical Research Institute of Infectious Diseases and the US Army Medical Research Institute of Chemical Defense are the world's premier sites for disseminating information pertaining to the medical management of chemical or biological warfare agent casualties from military or terrorist activity. Regularly scheduled traditional on-site classroom training is being supplemented by using state-of-the-art distance learning technologies to greatly expand the course availability. Viewing audiences include international and US military personnel as well as domestic first responders.

Medical Management of Chemical/Biological Casualties (MCBC) Course

- Audience: physicians and nurses
- Course taught by experienced personnel with working knowledge of threat
- Broad dissemination (4 in-house, 1 AMSUS, 18 off site, 1 video telecourse)

Field Management of Chemical/Biological Casualties Course

- Audience: medical and chemical non-commissioned officers, MSC, and chemical corps officers
- First echelon management of chemical/biological agent casualties
- Course stresses planning, establishment, and management of a battalion aid station for both chemical and biological casualties to include decontamination site

Satellite Courses

- Broad military, civilian, and international audience
- "Medical Response to Chemical Warfare and Terrorism"
- "Medical Response to Biological Warfare and Terrorism"

In 1999, the cost effectiveness of this new approach is staggering: the program cost of $53 per health care professional compared to the traditional classroom training of students at USAMRIID and USAMRICD of approximately $1,000 per student. Savings to the US Government is calculated at $22,554,000 per year.

FY99 Accomplishments and Deliverables:

- Ongoing collaboration with the Centers for Disease Control and Prevention
- Award-winning live interactive satellite broadcast on "Biological Warfare and Terrorism: the Military and Public Health Response"
- Live satellite broadcast of "Medical Response to Chemical Warfare and Terrorism"
- Developed CD ROM on Medical Management of Biological Warfare Casualties
- MCBC video course and Medical Response to Chemical Warfare and Terrorism video course is CME/CEU accredited
- Created Chemical Casualty Care Division website: http://ccc@apg.amedd.army.mil
- Provided education and consultation on medical issues of biological threat agents to military, federal, state, and local government, and civilian organizations
- Provided support to military quick response teams
- Published third edition of the Medical Management of Chemical Casualties Handbook

FY00/01 Objectives:

- Educate large audiences at reduced cost through distance learning modalities
- Distribute reference CD ROMs and video taped satellite courses
- Provide technical information and references on CD ROM and the website
- Continue live interactive satellite broadcast
- Provide ongoing education, consultative services, and support to military quick response teams on the medical defense against biological warfare and terrorism
- Revise and distribute reference MCBC handbook
- Update the Field Management of Chemical/Biological Casualties Handbook, the Textbook of Military Medicine, and other special publications (pyridostigmine)
- Initiate online registration, testing, and certification for distance learning courses

Course Attendance

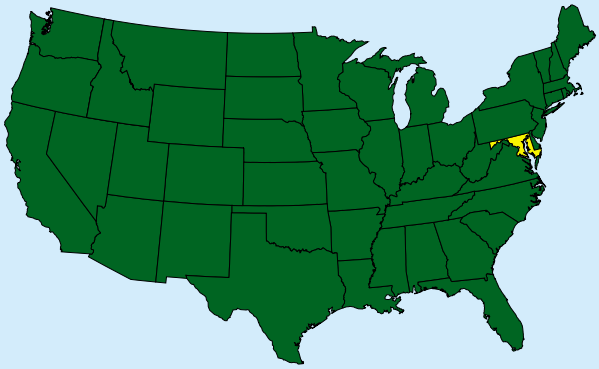
	Army	Navy	Air Force	Marines	Civilian	TOTAL
FY99 Actuals						
Medical Management of C/B Casualties Course	1,437	250	453	0	92	**2,232**
Field Management of C/B Casualties Course	239	22	2	1	25	**289**
Total Satellite Courses	3,507	1,264	3,878	0	15,167	**23,816**
FY99 TOTAL	**5,183**	**1,536**	**4,333**	**1**	**15,284**	**26,337**
FY00 (projected)						
Medical Management of C/B Casualties Course	1,581	275	498	0	101	**2,455**
Field Management of C/B Casualties Course	263	24	2	1	28	**318**
Total Satellite Courses	4,299	1,612	4,839	0	19,861	**30,611**
FY00 TOTAL	**6,143**	**1,911**	**5,339**	**1**	**19,990**	**33,384**

Program Schedule

Contractors:

Camber Corporation
Frederick, MD

SAIC
Joppa, MD



Medical CW Agent Pretreatments

Lead Service

Program Description:

The emphasis of medical chemical defense research efforts is on preventing chemical injuries by using prophylactics or pretreatments. Efforts are under way to design compounds that will "scavenge" and detoxify chemical warfare agents such as nerve agents or cyanide, and destroy the agent or physically remove it from the body. There are similar efforts to develop protection of exposed skin from exposure to chemical warfare agents through the use of topically applied cream barriers.

Computer-Aided Molecular Modeling

- The human butyrylcholinesterase enzyme has been mutated to reactivate after its inhibition by nerve agents, thereby making it available to rebind with nerve agent. The nerve agent is then hydrolyzed and excreted.
- This type of research employs the latest techniques in biotechnology, including enzymes tailored by site-directed mutagenesis

Developing Countermeasures

- Pharmaceutical compounds or methods that show therapeutic promise are evaluated to guarantee their safety, efficacy, and compatibility with established therapies and with other militarily relevant chemicals
- Each drug that is a candidate CW pretreatment, treatment, protectant, or decontaminant is subjected to a battery of tests to include behavioral studies that investigate whether these compounds interfere with performance
- Effective medical countermeasures to CW and BW agent threats are developed to minimize performance degradation and maximize return to duty

FY99 Accomplishments and Deliverables:

- Synthesized and assessed the efficacy of reactive components in a topical skin protective barrier cream and rank ordered 160 barrier creams for efficacy, allowing a down selection to 8 potential candidates
- Developed enhanced nerve agent scavengers, conducted dose-ranging studies and efficacy studies of candidate nerve agent scavengers, and characterized the structural alterations of physiologically significant enzymes that are inhibited by nerve agents
- Developed biological markers to monitor long-term effects of low dose or chronic exposure to CW agents

FY00/01 Objectives:

- Complete research sufficient for a Milestone 0 decision to initiate Phase 0 studies of safety and efficacy of the best candidate reactive moieties for reactive topical skin protectants
- Complete research sufficient for a Milestone 0 decision to develop, test, and select the best candidate(s) of genetically engineered scavengers as next generation antidotes for nerve agents

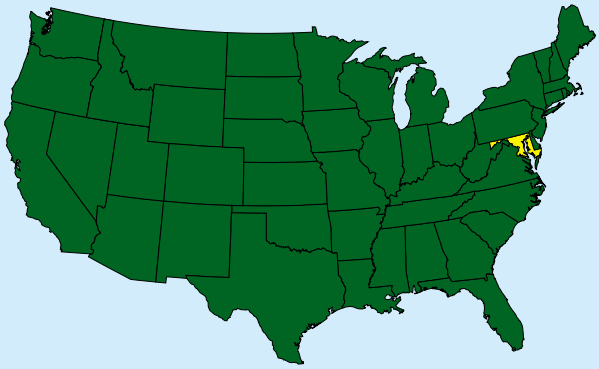
Schedule:

	FY98				FY99				FY00				FY01				FY02				FY03				FY04				FY05			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Milestones																																
Topical Skin Protectant					◆ III																											
Nerve agent scavenger pretreatment/therapy										◆ 0												◆ I										
Reactive Topical Skin Protectant										◆ 0												◆ I										

Program Schedule

Contractors:

McKesson Bioservices
Rockville, MD

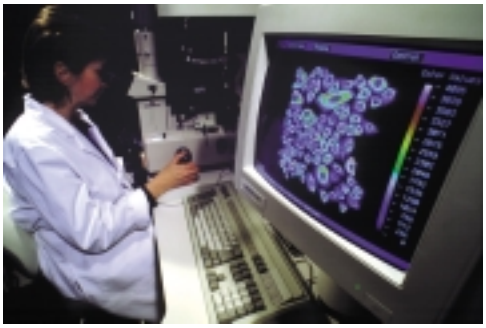


Medical CW/BW Agent Therapeutics and Diagnostics

Lead Service

Vesicant Research

- Confocal laser scanning microscopy and immunofluorescent techniques used to determine the effects of sulfur mustard following exposure



Common Diagnostic System

- A battery of nucleic acid driven detection systems
- Broad applications
- Sensitive

Field Cholinesterase Test Kit

- Self-contained, hardened
- Photometric analyzer
- Small sample size, serves up to 96 service members in one kit
- Results available in 4 minutes

Convulsant Antidote for Nerve Agent

- Consists of diazepam in an autoinjector
- Used as an adjunct therapy for nerve agent poisoning to control convulsions, protect against brain injury, and enhance survival

FY99 Accomplishments and Deliverables:

BW Agent Therapeutics/Diagnostics

- Determined methods to extract target molecules from biological samples (urine, blood, and nasal swabs) for diagnostic applications and demonstrated rapid specimen processing of whole blood
- Compared diagnostic technologies for down-selection and development of diagnostic devices and tests
- Established joint service and other government agency partners for a common diagnostic system for biological threat agents and endemic infectious diseases
- Identified compounds with antiviral activity against filoviruses and orthopox viruses
- Identified most useful new generation antibiotics for treatment of diseases caused by bacterial threat agents
- Determined first complete high resolution crystal structure for botulinum neurotoxin in support of rational therapeutic drug design

CW Agent Therapeutics/Diagnostics

- Screened 707 compounds from several chemical classes for blister agent post-exposure therapeutic properties, assessed the efficacy and safety of candidate antivesicants in in vivo models, and evaluated ocular and pulmonary therapies against sulfur mustard
- Evaluated a novel temporary wound dressing for skin, developed animal models to evaluate skin graft and antimicrobial wound dressings and treatments for blister agents, and designed and tested an enzyme-based skin and wound decontamination system
- Developed far-forward, rapid diagnostic tests for blister and nerve agents for realtime analysis of clinical samples
- Evaluated analytical procedures in animal models to diagnose and monitor vesicant-induced injury using commercially available instrumentation

FY00/01 Objectives:

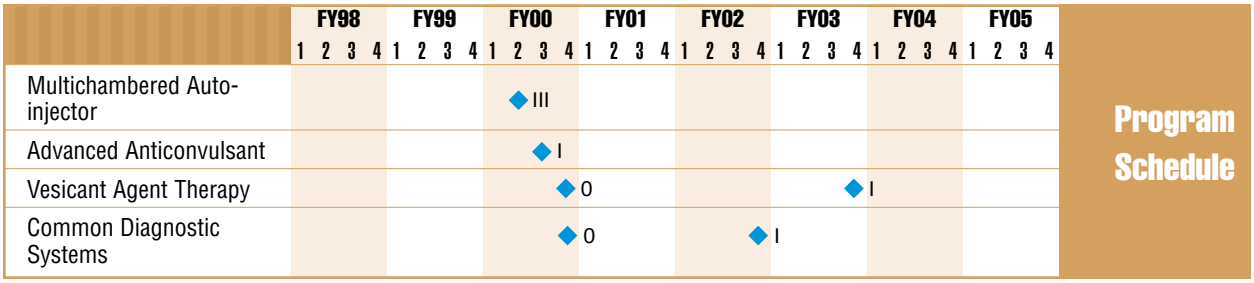
BW Agent Therapeutics/Diagnostics

- Develop therapeutics for staphylococcal enterotoxin B, botulinum neurotoxin, and ricin toxin based on rational drug design and molecular structures of the toxins
- Evaluate new generation of antibiotics for therapeutic efficacy against bacterial threat agents
- Validate PCR- and immunologically based diagnostic assays
- Transition a portable diagnostic device capable of identifying biological threat agent nucleic acids to advanced development

CW Agent Therapeutics/Diagnostics

- Confirm the efficacy and safety of advanced anticonvulsant; identify important potential interactions with other countermeasures; and transition candidates to Milestone I
- Initiate studies to determine pharmacological, physiological, and toxicological effects of long-term, low-level chemical warfare agents
- Assess the safety and efficacy of fielded, advanced development, and exploratory development countermeasures to novel threat agents, and select the best countermeasure to novel threats based on comparison of performance in differentiating studies
- Acquire, modify, and assess the efficacy of far-forward, rapid diagnostic tests for blister and nerve agents for real-time analysis of clinical samples on the battlefield
- Identify promising analytical procedures for diagnosis and dosimetry of vesicant-induced inflammation
- Initiate development of highly sensitive, forward deployable assay techniques to determine exposure to low levels of CW agents and subsequent physiological and toxicological effects

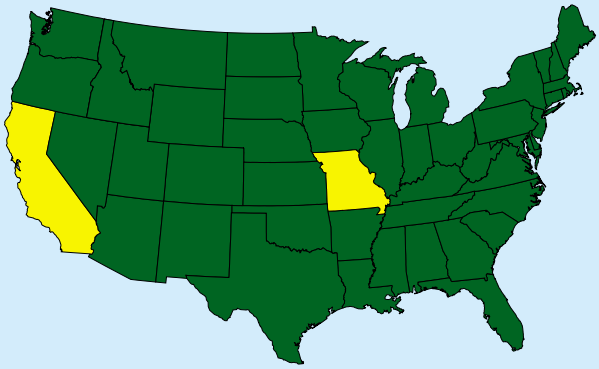
Schedule:



Contractors:

Cpheid
Sunnyvale, CA

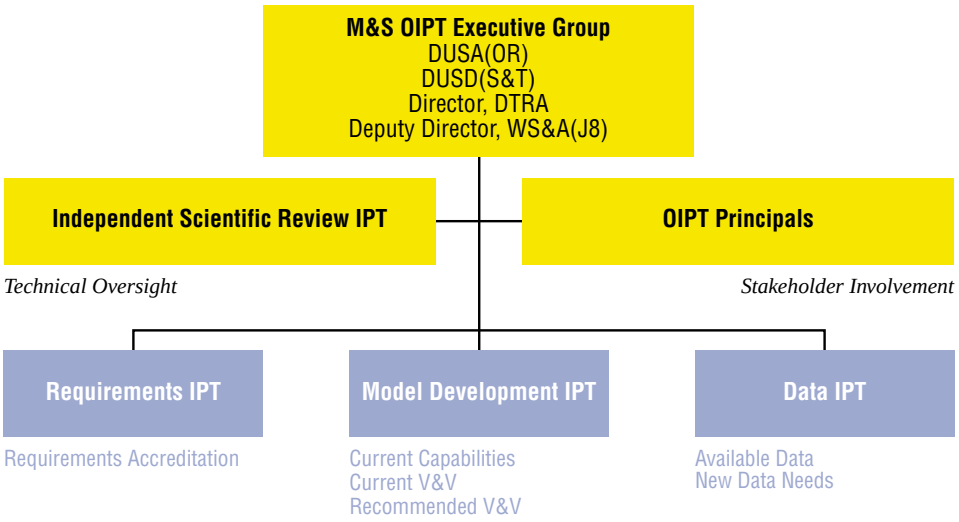
Meridian Medical Technologies, Inc.
St. Louis, MO

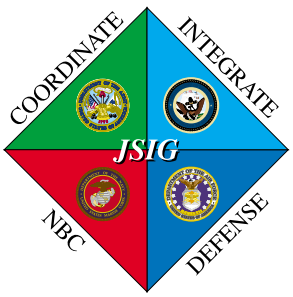


Modeling and Simulation

Lead Service

JSIG will ensure that the requirements for CBD Modeling and Simulation (M&S) are clearly articulated to the JSMG CAM for the development of a master plan that reflects all domains of relevant CBD M&S activities during FY02-07. The master plan will recommend resource allocation to the JSMG, the JSIG, and all DoD departments and agencies involved in development of CBD M&S products. The CBD M&S Business Area Manager will coordinate his M&S activities with the JSMG M&S CAM to ensure a smooth transition between CBD M&S technology development and CBD M&S product development. The CBD M&S program will institutionalize the standardized processes recommended by the M&S OIPT.





FY99 Accomplishments:

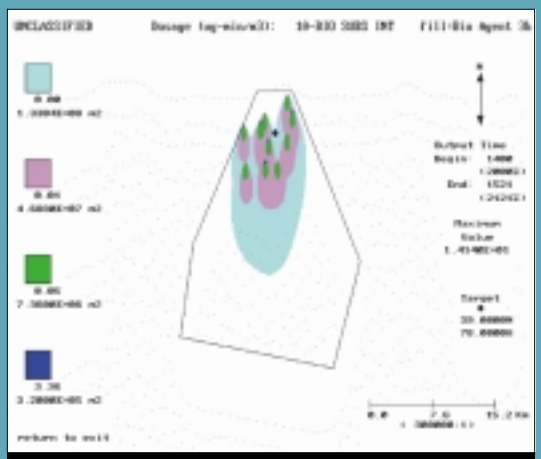
- Established an M&S Requirements Panel
- Initiated addition of CB effect into Joint Conflict and Tactical Simulation (JCATS) and insertion of CB Modular Semi-Automated Forces (ModSAF) into Joint Simulation Systems (JSIMS)
- Increased international cooperation
- Held the 5th Biennial Intelligence and Technology Update Symposium

FY00 Objectives:

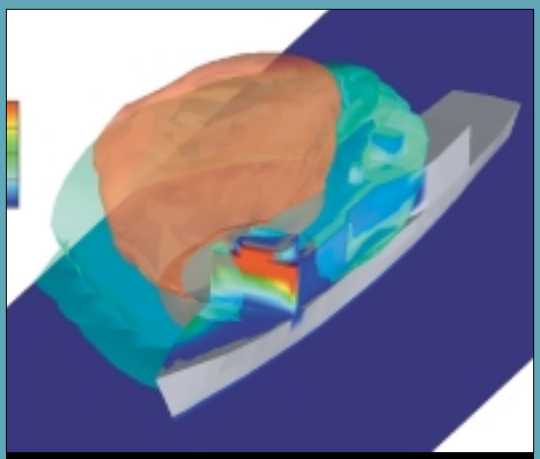
- M&S Roadmap for the CB Defense program
- Institutionalize OIPT processes in the CB Defense program
- Demonstrate benefits of Simulation Based Acquisition
- Translate key OIPT IPT participants into a long term M&S Advisory Panel
- Expand transport and dispersion tech base program to include urban, high altitude, and meteorological interfaces
- Continue upgrading CB Defense capabilities in Joint Warfare System (JWARS), JSIMS, and JCATS
- Deliver Vapor Liquid Surface Tracking (VLSTRACK) 3.1

FY01 Objectives:

- Initiate advanced development program
- Complete CB effects in JCATS
- Institutionalize Simulation Based Acquisition beginning with bio detection

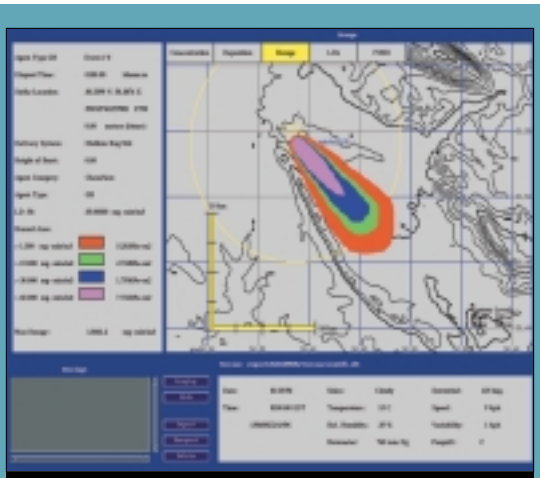


Battlefield Environment



CED for Ships and Vehicles

Conflict Simulation



Simulation Based Acquisition

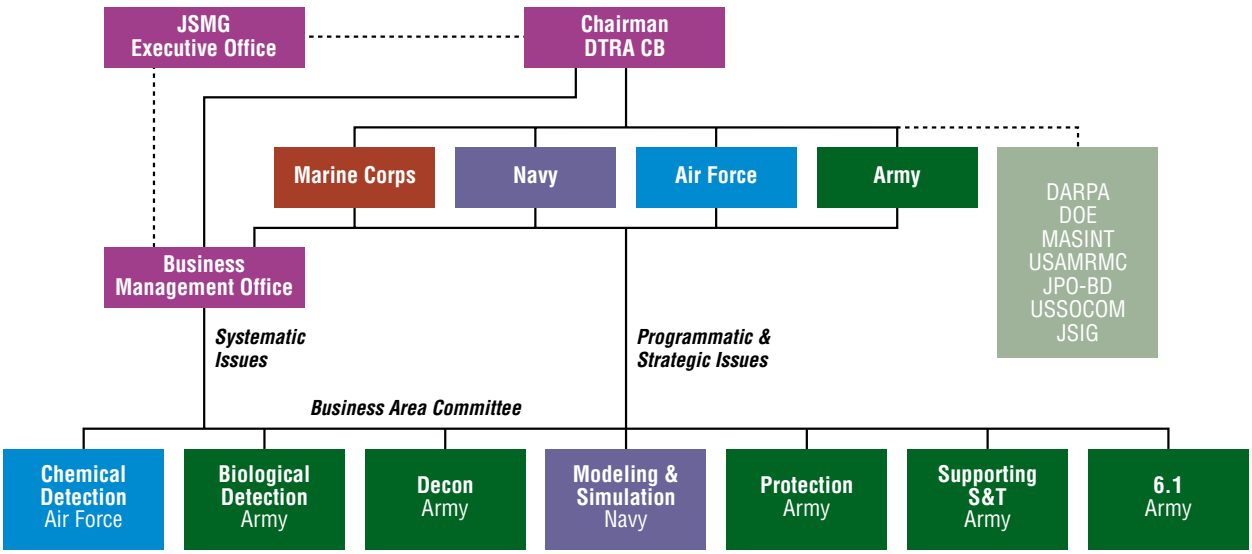
Lead Service

The DATSD(CBD) is the DDR&E office responsible for providing technical oversight of all Service and Defense Agency science and technology base (S&T) programs and reviewing these programs through three key DoD S&T documents:

- The Joint Warfighting S&T Plan (JWSTP)
- The Defense Technology Area Plan (DTAP), and
- The Basic Research Plan (BRP)

The Joint Science and Technology Panel for CBD (JSTPCBD) is the principal organization under the JSMG chartered to manage CB technology-based programs. The JSTPCBD follows Defense Planning Guidance in preparing the CB Defense Program S&T budget and programming efforts. As a result of the process, the JSTPCBD generates a list of ranked proposals with recommended funding levels.

Joint Science and Technology Panel for CB Defense (JSTPCBD)



FY99 Accomplishments:

- Initiated biological standoff detection to address Joint Biological Standoff Detection System requirements
- Transition the Biological Integrated ATD to Joint Biological Remote Early Warning System (JBREWS) ACTD and to Joint Biological Point Detection System (JBPDS) Engineering Manufacturing and Design (EMD) phase
- Initiated two collective protection new starts, Joint Transportable Collective Protection Equipment (JTCOPS) and the Joint Collective Protection Equipment (JCPE) programs
- Provided PSA technology base information, from the ASM and CB Filtration Teams, to redesign and verify the performance of PSA beds on the Comanche helicopter development program

FY00 Objectives:

- Initiate transition of active laser standoff technology to Navy for mature development (JSWILD)
- Transition Ink-Jet Aerosol Generators (IJAG) to MIT Lincoln Labs (for JBPDS) and Los Alamos National Lab
- Deliver small hand-held biosimulant generators (metered dose inhalers) for use in development testing of JBPDS and Biological Interim Detection System (BIDS) hardware
- Transition materials from the Low-Cost, Lightweight Tentage Project into the JTCOPS
- Complete the Advanced Lightweight CB Protection Project
- Transition Bio Aerosol Warning Sensor to three development programs (Portal Shield, JBREWS, and JBPDS Blk I) and to the Joint Program Office-Biological Defense Systems for further execution

FY01 Objectives:

- Complete transition of active laser standoff technology to Navy
- Demonstrate high efficiency, low temperature transpirated wall aerosol collector technology
- Transition Improved Closures into the JTCOPS
- Transition multiple reagents (antibodies and gene probes) to Critical Reagents Program
- Transition automated biological ID systems (gene-based detection, mass spectrometry) to JBPDS Blk II

What is an ACTD?

Advanced Concept Technology Demonstrations (ACTDs) are an integral element of reforming the acquisition process and accelerating the application of mature technologies to solve military problems. The ACTD process permits the early evaluation of mature advanced technology to meet the needs of the warfighter. Evaluations are accomplished by the warfighter to determine military utility before a commitment is made to proceed with formal acquisition. ACTDs also allow the warfighter to develop and refine operational concepts to take full advantage of new capabilities. ACTDs provide sustainment support for two years for the continued evaluation of the technology after which it can be transitioned into an appropriate phase of formal acquisition.

ACTDs are sponsored and executed jointly by a team composed of an operational user and a technology developer, with approval and oversight from the Deputy Under Secretary of Defense for Advanced Technology (DUSD(AT)). ACTDs are normally conducted under an Integrated Product Team (IPT) approach that considers the operational needs, training, supportability, and other related issues, as well as concerns of the acquisition community.

- The sponsor is responsible for defining the mission and scenario, concept of operations, operational forces, and post-demonstration evaluation criteria.
- The acquisition activity is responsible for day-to-day technical and program management. A range of conclusions can result from an ACTD from “don’t acquire” to “procurement,” or a mid-range solution that places the product into some mid-range posture within the acquisition cycle.

The ACTD concept has been used to good effect within the Joint CBD program, and its use continues today. Current CBD programs operating under the ACTD concept are described on the facing page.

Air Base/Port Biological Detection (Portal Shield)

Objective:
- To provide interim capability to detect, alarm/warn/dewarn, and presumptively identify BW attack.
- Evaluate the military utility of sensor network, RF links, alarms, and assessment processes.

Sponsor: CINCPAC and CENTCOM

ACTD Scenario: BW attack on an airbase/port facility

Status: ACTD completed in FY99, and transitioned into procurement as a result of JCS directed buy. Program will procure 70 sensors in FY99 and 97 in FY01.

Joint Biological Remote Early Warning System (JBREWS)

Objective:
- To evaluate the utility of an early warning capability that allows a compressed decision cycle to warn, report and protect deployed forces. Employs a system of distributive BW agent sensors. Components include the JBREWS architecture, the Deployable Unit Biological Detection System (DUBDS), the Short Range-Biological Standoff Detection System (SR-BSDS), and the data link from legacy biological detection systems.

Sponsor: EUCOM

ACTD Scenario: BW missile attacks on ground maneuver force in an assembly area

Status: Completion in FY00.

Chemical and Biological Individual Sampler (CBIS)

Objective:
- Improved detection and identification capabilities will provide greater awareness of immediate chemical exposure risk.
- More precise identification of both short or long term and low-level doses resulting in improved situational awareness, treatment and record keeping.
- Additional payoffs will include ability to perform realtime analysis of agents and toxic industrial materials (TIMs), communication of exposure information to command centers, and increased battlefield awareness and intelligence.

Sponsor: Joint Forces Command

ACTD Scenario: TBD

Status: The CBIS Phase I effort (COTS passive chemical sampling only) has been initiated with live agent testing of four COTS samplers and analysis of available portable analytical equipment. The CBIS Blue Ribbon Panel has selected technically promising Phase II proposals. Phase II efforts employ emerging technologies for active chemical and biological samplers/analyzers.

Restoration of Operations At Fixed Sites (RestOps)

Objective:
- Integrate and demonstrate mature technologies and tools used to mitigate adverse effects and restore operations at a fixed site before, during, or after an attack of either CW or BW, in order to support operational war plans.
- Develop, improve, and integrate concepts of operations (CONOPS) and tactics, techniques, and procedures (TTPs) for executing RestOps contingencies at a fixed site.
- Capture lessons learned for incorporation into joint, multiservice, and service doctrinal institutions.
- Evaluate the science and technologies available to support identification of potential improvements in current US policy for CONUS and OCONUS RestOps scenarios.

Sponsor: PACOM

ACTD Scenario: TBD

Status: ACTD management coordination and stand-up to be completed in FY00. Initial technology evaluations conducted and preliminary testing conducted in FY01.

Joint Service CB Defense Doctrine and Training

The Joint Service Integration Group (JSIG) is responsible for the coordination and integration of NBC Defense requirements, doctrine, and training.

Doctrine Initiatives:

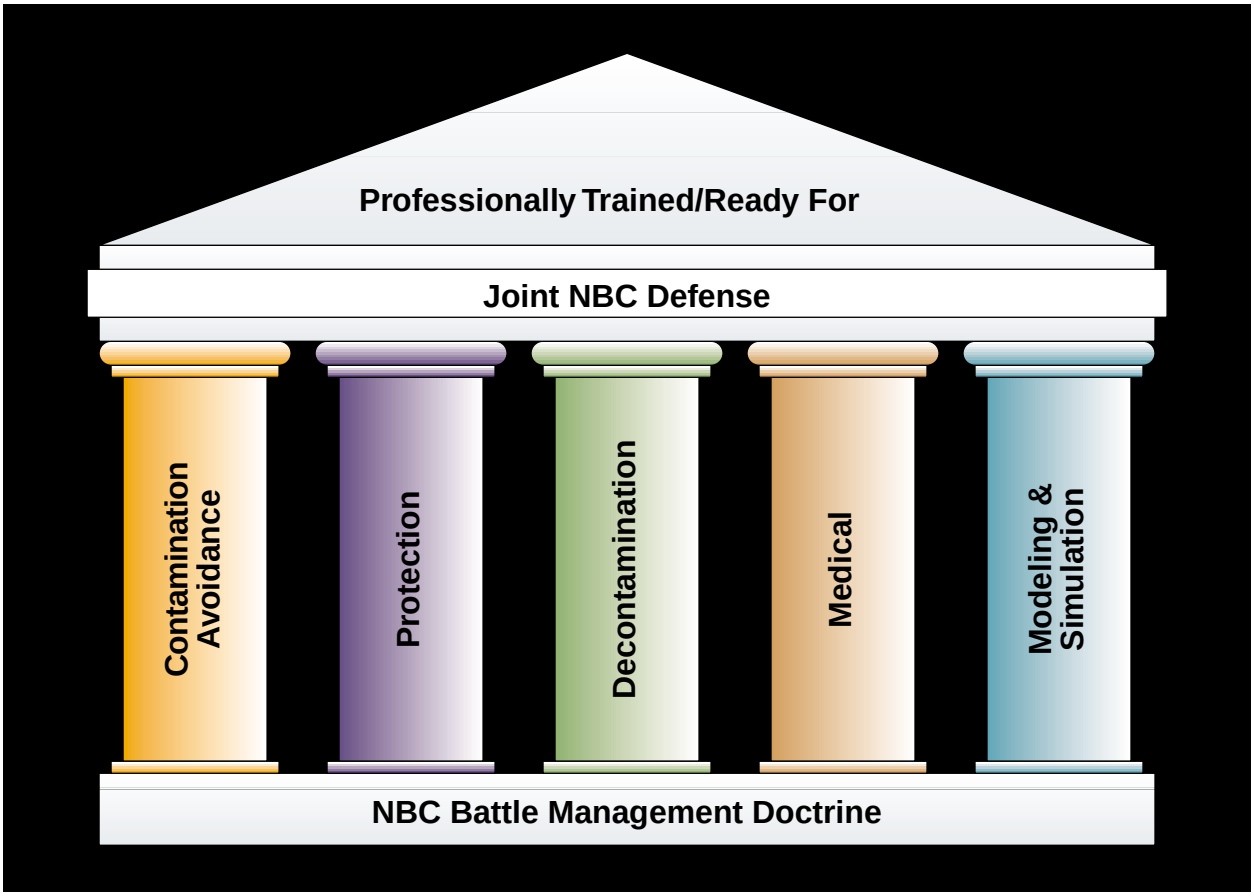
Objective: Develop a multi-year strategy for the revision and development of Joint/Multiservice CB Doctrine.

Process: Develop working relationship with Service Doctrine Commands, the Air Land Sea Application Center (ALSA) and the Joint Warfighting Center (JWFC) for development and revision of NBC doctrine specifically, Joint Publications, and Multiservice NBC Publications.

Training Initiatives:

Objective: Develop a process to review professional NBC defense training, identify problems in interoperability, reduce service-unique methodologies to encourage common training for all Services for enhancing joint warfighting operations, and develop common NBC defense tasks, conditions, standards of training.

Process: Establishment of a Training Capability Assessment Working Group (CAWG) to assess NBC training deficiencies and achievements. Initiatives will be based on current training guidelines.



FY99 Accomplishments:

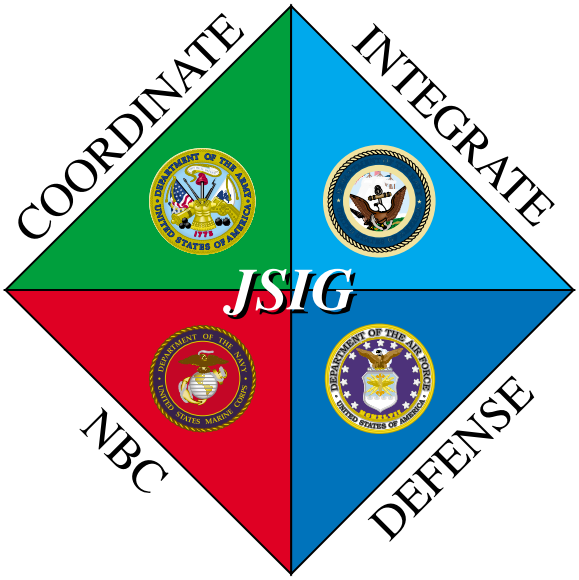
- Established Framework for Non Medical/Medical Priority List
- Developed inputs for the FY02-07 NBC Def Program Objective Memorandum
- Commissioned Study to Update the NBC Modernization Plan
- Established Overarching IPT for Modeling & Simulation
- Transitioned JSIG to Ft. Leonard Wood

FY00 Objectives:

- Update Joint Future Operational Capabilities to include Medical FOC's
- Develop integrated Non Medical/Medical Priority List
- Develop inputs for the FY02-07 NBC Defense POM
- Establish Modeling & Simulation Master Plan
- Participate in Restoration of Operations (RestOps) Advanced Concept Technology Demonstration
- Coordinate and Leverage International Programs

FY01 Objectives:

- Conduct Contamination Avoidance Materiel Alternative Analysis (MAA)
- Improve and update the Integrated Non Medical/ Medical Priority List
- Develop Joint Service Training formats for professional development
- Establish a Multiservice doctrine process



Training Centers:

Air Force Medical Training
Brooks AFB, TX

AMEDDC&S
Ft. Sam Houston, San Antonio, TX

MCCDC
Quantico, VA

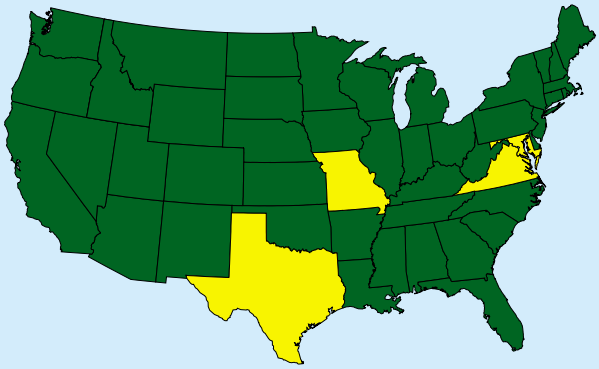
Navy Environmental Health Center
Norfolk, VA

SBCCOM
APG, MD

USAMRICD
APG, MD

USACMLS
Ft. Leonard Wood, MO

USAMRIID
Ft. Detrick, MD



CB Defense on the Web

Deputy Assistant to the Secretary of Defense for Chemical and Biological Defense (DATSD(CBD))
http://www.acq.osd.mil/cp/main.htm
Home page of the DATSD(CBD). Includes summary of activities of the Counterproliferation Support Program, the DoD Chemical and Biological Defense Program, and downloadable versions of reports.

Defense Threat Reduction Agency (DTRA)
http://www.dtra.mil
DTRA consolidates a variety of disparate, yet related, Defense Department functions to deal more effectively with threats posed by WMD.

U.S. Army Soldier and Biological Chemical Command (SBCCOM)
http://www.sbccom.apgea.army.mil
Home page of the US Army Soldier and Biological Chemical Command

Joint Service Materiel Group (JSMG)
http://www.jsmg.apgea.army.mil
The JSMG coordinates and integrates planning and programming of the nation's NBC Defense research, development, acquisition (RDA) and logistics programs pursuant to Defense Planning Guidance and the intent of the US Congress.

Joint Service Integration Group (JSIG)
https://jsigmsca.nswc.navy.mil
Home page of the Joint Service Integration Group. Provides information on the organization, the joint ORD's that are its principle product and the latest information on CB Defense Modeling and Simulation including the M&S OIPT. This is a secured site and requires a username and password.

U.S. Army Chemical School (USACMLS)
http://www.wood.army.mil/usacmls
The USACMLS, located at Fort Leonard Wood, Missouri, is one of the most advanced and sophisticated military training centers in the world. It is also the Joint NBC Defense Training Center because the Army, Navy, Air Force, and Marines all conduct their NBC training at the USACMLS.

Joint Service Chemical Biological Information System (JSCBIS)
http://www.sarda.army.mil/jscbis/jscbis.htm
Provides financial and programmatic information for DoD's Chemical and Biological Defense Program. Requires user identification and password, which can be applied for through home page

Navy Chemical and Biological Defense
http://www.chembiodef.navy.mil
Chief of Naval Operations N86DC and the Commandant of the Marine Corps discuss the strategic direction for Naval Operations in the 21st century.

DefenseLink
http://www.defenselink.mil
The official home page of the Department of Defense. Includes numerous reports and links to DoD organizations.

Chemical and Biological Defense Information Analysis Center (CBIAC)
http://www.cbiac.apgea.army.mil
CBIAC serves as the DoD focal point for Chemical Warfare and Chemical Biological Defense (CW/CBD) technology. The CBIAC serves to collect, review, analyze, synthesize, appraise and summarize information pertaining to CW/CBD. It provides a searchable database for authorized users and links to many other CW/CBD sites.

Joint Program Office — Biological Defense (JPO-BD)
http://www.jpobd.net
The JPO-BD has management oversight responsibility for all DoD Biological Defense (BD) acquisition programs, including enhanced detection systems and BD medical products.

Anthrax Vaccine Immunization Program
http://www.anthrax.osd.mil
Home page for the DoD's anthrax immunization program. The page has links to the history and facts about the program.

The Army Medical Department Center and School
http://www.armymedicine.army.mil/armymed
Provides extensive information about the Army's Medical Department. Includes information on doctrine development and the use of medical NBC defense products.

Program Manager for Chemical Demilitarization
http://www-pmcd.apgea.army.mil/
Provides information on the Chemical Stockpile Disposal Program, the Non-Stockpile Chemical Material Program, the Alternative Technologies Program, the Chemical Stockpile Emergency Preparedness Program, and the Cooperative Threat Reduction Office.

United States Army Medical Research Institute of Chemical Defense (USAMRICD)
http://chemdef.apgea.army.mil/
Home page for USAMRICD-the nation's lead laboratory for research to advance the medical prevention and treatment of chemical warfare casualties.

U.S. Army Medical Research and Material Command (USAMRMC)
http://mrmc-www.army.mil/
Provides information on Medical Chemical Defense Overview, Nerve, Agents, Cyanide, Skin Decontamination and Protection, Performance Effects of Protectant Drugs, and Chemical Casualty Management. Linked to US Army Medical Research Institute of Infectious Diseases, location of much of the science and technology research efforts for medical biological defense.

United States Army Medical Research Institute of Infectious Diseases (USAMRIID)
http://www.usamriid.army.mil
Home page of the US Army Medical Research Institute of Infectious Diseases, location of much of the science and technology research efforts for medical biological defense.

SBCCOM RDA Enterprise Edgewood Site
http://www.sbccom.apgea.army.mil/RDA/index.html
The Army's principal R&D center for chemical and biological defense technology, engineering and services.

Defense Advanced Research Projects Agency (DARPA)
http://www.darpa.mil/
Home Page of the DARPA describes basic and applied research and development of projects being performed for DoD.

Office of the Special Assistant for Gulf War Illness
http://www.gulflink.osd.mil/
Official website of the Special Assistant for Gulf War Illness. The site provides information regarding the finding of the office on Gulf War Illness and links to related information.

Dugway Proving Ground
http://www.atc.army.mil/~dugway/
Home page of the US Dugway Proving Ground, location of much of the field tests of chemical and biological defense equipment and repository of historical chemical and biological warfare information.

U.S. Navy Postgraduate School — NBC Bibliography
http://vislab-www.nps.navy.mil/~library/bibs/chemtoc.htm
The Navy Postgraduate School Dudley Knox Library's web page for NBC related reports, bibliographies, text, periodical literature, and links to other NBC web sites.

United States House of Representatives Committee on Armed Services
http://www.house.gov/hasc
Home Page of the National Security Committee of the 106th Congress and a link to all major legislation concerning National Defense.

United States Senate Committee on Armed Services
http://www.senate.gov/~armed_services/
Home Page of the Committee on Armed Services of the US Senate and a link to all major legislation concerning National Defense.

The NBC Medical Defense Information Server
http://www.nbc-med.org
The Nuclear Biological and Chemical Medical web page contains extensive medical documentation, training material, audio-video clips, a powerful search engine, and links to other related internet sites.

Chemical and Biological Weapons Nonproliferation Project
http://www.stimson.org/cwc
This project serves as a problem-solver and an information clearinghouse in the general areas of CB treaties, chemical demilitarization (especially in Russia), CB terrorism, and related areas. Sponsored by the Stimson Center.

The OPCW Home Page
http://www.opcw.nl/
The home page of the Provisional Technical Secretariat, the organization for the Prohibition of Chemical Weapons, and the Preparatory Commission of the Chemical Weapons Convention (CWG). Provides detailed information about the CWC, its implementation, and technical and background information on chemical weapons, defenses, and related subjects.

Arms Control and Disarmament Agency (ACDA) Home Page
http://www.acda.gov/
Home page of the Department of State's Arms Control and Disarmament Agency. Provides information on nuclear, biological, and chemical weapons and how their delivery systems pose a major threat to US security and that of our allies.

Cal Poly CBW Page
http://www.calpoly.edu/~drjones/chemwarf.html
This page was developed by the students in Chem 450 at Cal Poly , SLO, during Spring 1996. The goal is to provide an overview of chemical and biological warfare, weapons, and efforts to outlaw them. This site provides a comprehensive overview of numerous aspects of chemical and biological warfare and defenses.

Center for Strategic and International Studies
http://www.csis.org
Home page of a public policy research institution/think tank that concentrates its efforts in U.S. foreign policy and national security issues. Includes information on Weapons of Mass Destruction, US Domestic Preparedness, and International Terrorism.

Nuclear Control Institute
http://www.nci.org/home .html
Home page of an independent research and advocacy center specializing in problems of nuclear proliferation.

Center for Defense Information
http://www.cdi.org/issues/cbw
Information on chemical and biological warfare from a national think tank.

Center for International Security and Cooperation
http://www.standford.edu/group/cisac/test/science/biochem.html
Dedicated to research and training in issues of international security with a specialization in issues concerning the proliferation of chemical and biological weapons.

Center for Arms Control, Energy and Environmental Studies at the Moscow Institute of Physics and Technology
http://blue.iris.mipt.ru
Information concerning destruction of nuclear weapons, START III, and other nonproliferation issues.

Eliminating Weapons of Mass Destruction
http://www.stimson.org/zeronuke
A subsection of the Henry L. Stimson Center, a research institute devoted to national security and nonproliferation issues.

SIPRI Chemical and Biological Warfare Project
http://www.brad.ac.uk/acad/sbtwc/
The Joint University of Bradford-SIPRI Chemical and Biological Warfare Project aims to provide a better means to disseminate information on the 1993 Chemical Weapons Convention (CWC), the 1972 Biological and Toxin Weapons Convention (BTWC), and related chemical and biological warfare issues.

Dialogue on Assembled Chemical Weapons Assessment (DAWCA)
http://dialogue.pmacwa.org/
A forum to support and enable the proactive free exchange of information and ideas related to the ACWA program mission including technology and research related to chemical weapons.

Chemical Weapons Working Group
http://www.cwwg.org/cwwg.html
CWWG represents an international coalition of citizens living near chemical weapons storage sites in the United States, the Pacific and Russia who will be most affected by the disposal of these munitions. Includes information related to chemical weapons.

Nuclear Information and Resource Service
http://www.nirs.org
NIRS is the information and networking center for citizens and environmental organizations concerned about nuclear power, radioactive waste, radiation, and sustainable energy issues.

Chemical and Biological Weapons Resource Page
http://cns.miis.edu/research/cbw/index.htm
The Center for Nonproliferation Studies of the Monterey Institute of International Studies is the world's largest nongovernmental organization devoted to combating the spread of Weapons of Mass Destruction.

NBC Industry Group
http://www.nbcindustrygroup.com/
Home page of the NBC Industry Group, an association of organization supporting NBC defense, domestic preparedness, and the Chemical Weapons Convention.

Biomedical Research Institute of Mitretek Systems
http://www.mitretek.org/envene/site-map.html
Provide critical analyses and objective evaluations in toxicology and biomedical science. Includes hazard and risk assessment, as well as an internally funded research program in mechanistic toxicology and biology.

Battelle's Chemical and Biological Business
http://www.batelle.org.chembio/default
Battelle's CB Defense Product Line is organized to support the US DoD programs. For CB Defense and Domestic Preparedness. Battelle's staff includes more than 100 scientists and engineers, many with previous Active and/or ongoing reserve component military operational experience. Their project Experience aligns with a broad range of CB Defense Functional Areas.

Acronyms

AA Abbreviate Analysis
AAN Army After Next
ACADA Acquisition Category Agent Detector Alarm
ACAT Acquisition Category
ACPG Advanced Chemical Protective Garment
ACTD Advanced Concept Technology Demonstration
ADM Acquisition Decision Memorandum
ADVED Atmospheric Dispersion of Vapor and Evaporating Drops
AF Air Force
AF/IL Assistant Chief of Staff (Installations and Logistics)
AF/ILEO Civil Engineer (Operations)
AF/ILEOR Civil Engineer (Operations, Readiness)
AFCESA Air Force Civil Engineer Support Agency (Air Staff Field Operating Agency)
AFOTEC Air Force Operational Test and Evaluation Command
AIROPs Air Operations
AIT Alteration Installation Team
ALSA Air Land Sea Application
AMC Army material command
ANBACIS Automated, Nuclear, biological & Chemical Information System
AoA Analysis of Alternatives
AOR Area of Responsibility
APBA Acquisition Program Baseline Agreement
AS Acquisition Strategy
ASA(RDA) Assistant Secretary to the Army for Research, Development and Acquisition
ASBREM Armed Services Biomedical Research Evaluation and Management Committee
ASN(RDA) Assistant to the Secretary of Defense for Nuclear Chemical and Biological Matters
BAA Broad Agency Announcement
BAWS Biological Agent Warning Sensor
BDS Biological Detection System
BIDS Biological Integrated Detection System
BRP Basic Research Plan
BSDS Biological Standoff Detection System
BTN Below-the-Neck
BV Base Vehicle
BW Biological Warfare
BWC Biological Weapons and Toxin Convention
C412 Command, Control, Communication, Computers, Information and Intelligence
CAM Chemical Agent Monitor
CAM Commodity Area Manager
CAPDS Chemical Agent Point Detection System
CARDS Chemical Agent Remote Detection System
CAWG Capability Assessment Working Group
CB Chemical and Biological
CBD Chemical Biological Defense
CBDE Chemical and Biological Defense Equipment
CBDP Chemical Biological Defense Program
CBIRF Chemical/Biological Incident Response Force
CBPS Chemically & Biologically Protected Shelter
CBR Chemical, Biological, and Radiological
CBRD Chemical, Biological, and Radiological Defense
CBW Chemical and Biological Warfare
CCS Central Control Station
CDR Critical Design Review
CDTF Chemical Defense Training Facility
CDU Control Display Unit
CE Concept Exploration
CENTCOM Central Command
CFD Computational Fluid Dynamics
C-HAG Chemical Hazard Assessment Guide
CHATH Chemically Hardened Air Transportable Hospital
CINC Commander in Chief
CINCPAC Commander in Chief, Pacific Command
CIS Commonwealth of Independent States
CLS Contractor Logistics Support
CNO Chief of Naval Operations
COIC Critical Operations, Issues and Criteria
CONOPs Concepts of Operations
COSAL Coordinated Shipboard Allowance List
COTS Commercial-off-the-Shelf
CP Collective Protection
CP DEPMEDS Chemically Protected Deployable Medical System
CPE Collective Protection Equipment
CPO Chemical Protection Overgarment
CPS Collective Protection System
CRADA Cooperative Research and Development Agreement
CW Chemical Warfare
CWC Chemical Weapons Convention
CWNAVSIM Chemical Warfare Naval Simulation
CWTNA Chemical Warfare Threat to Naval Aviation
DARPA Defense Advanced Research Projects Agency
DATSD Deputy Assistant to the Secretary of Defense
DBCRA Defense Base Closure and Realignment Act
DCC Damage Control Central
DCNO Deputy Chief of Naval Operations
DCSOPS U.S. Army Deputy Chief of Staff for Operations
DDR&E Director, Defense Research and Engineering
DDR Detailed Design Reviews
DEPSECDEF Deputy Secretary of Defense
DNA Deoxyribonucleic Acid
DoD Department of Defense
DON Department of the Navy
DP Decontamination Pumper
DPG Dugway Proving Ground
DPOS Disaster Preparedness Operations Specialist
DT Developmental Test
DT&E Developmental Test & Evaluation
DTAP Defense Technology Area Plan
DTRA Defense Threat Reduction Agency
DU Detector Unit
DUBDS Deployable Unit Biological Detection System
DUSD(AT) Deputy Under Secretary of Defense for Advanced Technology
ECP Engineering Change Proposal
ECU Environmental Control Unit
EDM Engineering Development Model
EDT Engineering Design Test
EEE Eastern Equine Encephalitis
ELISA Enzyme-Linked ImmunoSorbant Assay
EMD Engineering & Manufacturing Development
EOD Explosive Ordinance Disposal
ECBC Edgewood Chemical and Biological Center
EUCOM European Command
FAT First Article Test
FBI Federal Bureau of Investigation
FCA Functional Configuration Audit
FCT Foreign Competitive Test
FDA Food and Drug Administration
FDL Forward Deployable Lab
FEP Final Evaluation Period
FIF Fexed Installation Filter
FMP Fleet Modernization Process
FOC Full Operational Capability
FR Fire Resistant
FUE First Unit Equipped
FY Fiscal Year
GFE Government Furnished Equipment
GOTS Government Off-the-Shelf
GPS Global Positioning System
HEPA High-Efficiency Particulate Arresting
HMMWV High Mobility Multi-Purpose Wheeled Vehicle
HPW High Pressure Washer
HTH High Test Hypochlorite
IBAD Interim Biological Agent Detector
ICAM Improved Chemical Agent Monitor
ICPS Improved Collective Protection System
ICW Interactive Course Ware
IDC Independent Duty Corpsman
IJAG Ink-Jet Aerosol Generators
ILA Independent Logistic Assessment
ILSP Integrated Logistic Support Plan
IMS Ion Mobility Spectrometry
IND Investigational New Drug
IOC Initial Operating Capability
IOT&E Initial Operational Test & Evaluation
IP Individual Protection
IPDS Improved (Chemical Agent) Point Detection System
IPE Individual Protection Equipment
IPR In-Progress Review
IPS Integrated Program Summary
IPT Integrated Product Team
IS Interium standardization
ISEA In-Service Engineering Agent
IT Integrated Test
JBPDS Joint Biological Point Detection System
JBREWS Joint Biological Remote Early Warning System
JBUD Joint Biological Universal Detector
JCAD Joint Chemical Agent Detector
JCBUD Joint Chemical Biological Universal Detector
JCPIP Joint Collective Protection Improvement Program
JFT Joint Field Trial
JILSP Joint Integrated Logistic Support Plan
JNBCDB Joint Nuclear, Biological, Chemical Defense Board
JORD Joint Operational Requirements Document
JPACE Joint Protective Aircrew Ensemble
JPO Joint Program Office
JPO-BC Joint Program Office for Biological Defense
JPO-BD Joint Program Office for Biological Defense

JPO-BD Joint Program Office for Biological Defense
JSA Joint Service Agreement
JSAM Joint Service Aircrew Mask
JSCBIS Joint Service Chemical and Biological Information System
JSED Joint Sensitive Equipment Decontamination
JSFXD Joint Service Fixed Site Decontamination
JSGPM Joint Service General Purpose Mask
JSIG Joint Service Integration Group
JSLIST Joint Service Lightweight Integrated Suit Technology
JSLNBCRS Joint Service Lightweight Nuclear, Biological, Chemical Reconnaissance System
JSLSCAD Joint Service Lightweight Standoff Chemical Agent Detector
JSMG Joint Service Material Group
JTCG Joint Technology Coordination Group
JTPCBD Joint Technology Panel on Chemical and Biological Defense
JVAP Joint Vaccine Acquisition Program
JWARN Joint Warning and Reporting Network
JWCA Joint Warfighting Capability Assessment
JWSTP Joint Warfighting S&T Plan
LAV Light Armored Vehicle
LCCE Life Cycle Cost Estimate
LIDAR LIght Detecting And Ranging
LMS Light Multipurpose Shelter
LP Limited Protection
LR/SR Long Range/Short Range
LRIP Low Rate Initial Production
LSP Logistics Support Plan
MA Multichambered Autoinjector
MARS Multi-warfare Assessment and Research System
MBRR Molecular Biologies Research Resource
MCBC Medical Management of Chemical/ Biological Casualties
MDS Modular Decontamination System
MEF Marines Expeditionary Force
MICAD Multipurpose Integrated Chemical Agent Detector
MicroPCM Microencapsulated Phase Change Material
MNS Mission Needs Statement
MOPP Mission Oriented Protective Posture
MOU Memorandum of Understanding
MPF Maritime Prepositioning Force
MRB Milestone Review Board
MS Milestone
MSC Medical Service Corps
MSC Military Sealift Command
MTCR Missile Technology Control Regime
MTW Major Theater War
MULO Multipurpose Overboot
NATO North American Treaty Organization
NAVAIR Naval Air Systems Command
NAVSEA Naval Sea Systems Command
NBC Nuclear, Biological, and Chemical
NBCRS Nuclear, Biological, Chemical Reconnaissance System
NCB Nuclear, Chemical, and Biological
NCF Naval Construction Force
NCTCD Naval Construction Training Center Detachment
NCTRF Naval Clothing and Texture Research Facility
NDA New Drug Application
NDI Non-Developmental Item
NEDU Navy Experimental Diving Unit
NFAF Naval Fleet Auxiliary Force
NMRI Naval Medical Research Institute
NSWC-DD Naval Surface Warfare Center-DahIgren Division
NTP Navy Training Plan
NWP Naval Warfare Plan
O&M,N Operations & Maintenance, Navy
OA Operational Assessment
OCONUS Outside Continental United States
OIPT Overarching Integrated Product Team
ONR Office of Naval Research
OPCERT Operational Certification
OPEVAL Operational Evaluation
ORD Operational Requirements Document
OSD Office of the Secretary of Defense
OT Operational Testing
OT&E Operational Test and Evaluation
P31 Pre-Planned Product Improvement
PAC Post Award Conference
PACOM Pacific Command
PADD Passive Anti-Drown Device
PATS Protective Assessment Test System
PC Personal Computer
PCR Polymerase Chain Reaction
PDA Polydiacetylene
PDR Preliminary Design Review
PDRR Program Definition and Risk Reduction
PE Program Element
PIP Product Improvement Proposal/Program
PLA/ELA Product License Application/Establishment License Application
POM Program Objective Memorandum
PPBE Programming, Planning, Budgeting, and Execution
PPQT Pre-Production Qualification Testing
PPU Patient Processing Unit
PQT Preliminary Qualification Test
PVT Position, Velocity, and Time
PVT Product Verification Test
QDR Quadrennial Defense Review
R&D Research and Development
R-DNA Recombinant Deoxyribonucleic Acid
RDT&E Research, Development, Testing, and Evaluation
RDU Remote Display Unit
RESTOP Restoration Operations
RF/SAT Radio Frequency/Satellite
RFP Request for Proposal
RRT Risk Reduction Test
S&T Science and Technology
SACPS Selected Are Collective Protection System
SAF/AQP Assistant Secretary of the Air Force (Acquisition, Directorate of Global Power Programs)
SBA Simulation Based Acquisition
SBIR Small Business Innovation Research
SCAMP Shipboard Chemical Agent Monitor Portable
SCN Ship Construction Navy
SDPR Software Development Program Review
SDR System Design Review
SEB Staphylococcal Entrerotoxin B
SECDEF Secretary of Defense
SHIPALT Ship Alteration
SID Shipboard Installation Drawing
SOCOM Special Operations Command
SOF Special Operations Forces
SOO Statement of Objectives
SOP Standard Operating Procedure
SOUTHCOM Southern Command
SPFC Single Particle Fluorescence Cell
SR-BSDS Short Range Biological Standoff Detection System
SRR System Requirement Review
SSEB Source Selection Evaluation Board
SSN Standard Study Number
TAACOM Tank-automotive & Armaments Command
TACAIR Tactical Aircraft
TACWAR Tactical Warfare
TBD To Be Determined
TDP Technical Data Package
TECHEVAL Technical Evaluation
TEMP Test and Evaluation Master Plan
TM Technical Manual
TOC Tactical Operations Center
TOR Tentative Operational Requirement
TPDD Time-phased Deployment Data
TQG Tactical Quiet Generator
TRADOC Training and Doctrine Command
TRR Test Readiness Review
TSP Topical Skin Protectant
TTCP The Technical Cooperation Program
TTP Tactics, Techniques, & Procedures
UJTL Universal Joint Task Listing
ULSS User's Logistic Support Summary
USA United States Army
USACMLS U.S. Army Medical Research Institute of Infectious Diseases
USAMRMC U.S. Army Medical Research and Material Command
USD(A&T) Under Secretary of Defense for Acquisition and Technology
USMC United States Marine Corps
USN United States Navy
USSOCOM U.S. Special Operations Command
VEE Venezuelan Equine Encephalitis
VIG Vaccina Immune Globulin
VLSTRACK Vapor, Liquid, and Solid Tracking
WEE Western Equine Encephalitis
WIPT Working Integrated Product Team
WMD Weapons of Mass Destruction
WWW World Wide Web

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